CSIS-CM-12-219

# An Analysis of Department of Defense Services Contract Trends, 1990–2011

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December 2012

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*This document constitutes the final technical deliverable for Grant No. N00244-12-1-0011 awarded by the Naval Postgraduate School's Acquisition Research Program*

# Report Documentation Page

*Form Approved*
*OMB No. 0704-0188*



| 1. REPORT DATE | 2. REPORT TYPE | 3. DATES COVERED |
|---|---|---|
| **DEC 2012** | | **00-00-2012 to 00-00-2012** |

| 4. TITLE AND SUBTITLE | 5a. CONTRACT NUMBER |
|---|---|
| **An Analysis of Department of Defense Services Contract Trends, 1990-2011** | 5b. GRANT NUMBER |
| | 5c. PROGRAM ELEMENT NUMBER |
| 6. AUTHOR(S) | 5d. PROJECT NUMBER |
| | 5e. TASK NUMBER |
| | 5f. WORK UNIT NUMBER |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Defense‐Industrial Initiatives Group,Center for Strategic and International Studies,1800 K Street NW,Washington,DC,20006** | 8. PERFORMING ORGANIZATION REPORT NUMBER |
| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) | 10. SPONSOR/MONITOR'S ACRONYM(S) |
| | 11. SPONSOR/MONITOR'S REPORT NUMBER(S) |

12. DISTRIBUTION/AVAILABILITY STATEMENT
**Approved for public release; distribution unlimited**

13. SUPPLEMENTARY NOTES

14. ABSTRACT

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15. SUBJECT TERMS

| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
|---|---|---|---|---|---|
| a. REPORT | b. ABSTRACT | c. THIS PAGE | | | |
| **unclassified** | **unclassified** | **unclassified** | **Same as Report (SAR)** | **67** | |

## Abstract

This report analyzes contract spending on services by the U.S. Department of Defense (DoD) between the years 1990–2011. It does so using data from the Federal Procurement Data system (FPDS) in conjunction with other sources. It first describes the trends in overall DoD service contracting, breaking the dollars obligated down by DoD component (Army, Air Force, Navy, and civilian agencies), by service area, by level of competition, by funding mechanism, and by contract vehicle. It also presents the top 20 service defense contractors and the breakdown of service contract obligations by small, medium, and large companies. Next, the report analyzes contract spending in six service areas: Professional Administrative and Management Services (PAMS), Information and Communications Technologies (ICT), Research and Development (R&D), Facilities-Related Services and Construction (FRS&C), Equipment-Related Services (ERS), and Medical Services (MED). For each of these areas, the report presents how contract obligations are broken down by DoD component, by level of competition, by funding mechanism, and by contract vehicle. It also presents the top 20 contractors for each service area and the obligated dollars by small, medium, and large contractors.

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# 1. Introduction

Spending by the Department of Defense (DoD) on services contracts, which range from clerical and administrative work to vehicle maintenance to research and development (R&D), has been largely neglected by past studies of DoD spending trends. Yet DoD spending on services contract actions amounted to just under $200 billion in 2011, more than 50 percent of total DoD contract spending and nearly one-third of the entire DoD budget. Both the executive branch and Congress have implemented policies to improve acquisitions of services. Illustrating the administration's commitment to improving service acquisition procedures, then Under Secretary of Defense for Acquisition, Technology, and Logistics Dr. Ashton Carter stated, "Most of our services acquirers, unlike weapons-system acquirers, are amateurs. … I intend to help them get better at it."[1] More recently, in November 2012, the Pentagon's Better Buying Power 2.0 initiative released by Mr. Frank Kendall, Under Secretary of Defense for Acquisition, Technology and Logistics, includes a key focus on services contracting. However, the impacts of the Department's efforts remain uncertain without a clear, concise analysis of past spending. In addition, an understanding of the industrial base supporting DoD service contracts will also be crucial to any analysis of these efforts.

The goal of this report is to provide policymakers with an in-depth analysis of trends in DoD spending on services contract actions and the companies that provided them, using data from the years 1990 to 2011. The primary source of data for this report is the Federal Procurement Data System (FPDS); section 2 explains the methodology used in analyzing data from this and other sources. Section 3 of this report presents data on overall DoD services contract spending by contracting entity (Army, Air Force, Navy, and civilian DoD), degree of competition, contract vehicle type, and funding mechanism. It also presents the top 20 service defense contractors and the breakdown of service contract obligations by small, medium, and large companies. Next, sections 4-9 of the report analyze contract spending in six service areas: Professional Administrative and Management Services (PAMS), Information and Communications Technologies (ICT), Research and Development (R&D), Facilities-Related Services and Construction (FRS&C), Equipment-Related Services (ERS), and Medical Services (MED). For each service area, the report presents how contract obligations are broken down by DoD component, by level of competition, by funding mechanism, and by contract vehicle. It also presents the top 20 contractors for each service area and the obligated dollars by small, medium, and large contractors.

[1] Carter, Ashton B. "Pentagon Efficiency Initiatives: Are They Enough to Stave Off More Defense Cuts?" The Heritage Foundation. Washington, DC. April 20, 2011. http://www.cspanvideo.org/program/Ashto&showFullAbstract=1

# 2. Methodology

This report analyzes trends in dollars obligated for services contracts by the DoD overall and by its key components: Army, Navy, Air Force, and civilian agencies. It thereby seeks to provide an in-depth assessment of the drivers behind more than half of all DoD contract dollars. The report also includes findings on the services' industrial base supporting the DoD in its missions.

Unless otherwise noted, all data in this study cover the timeframe extending from 1990 to 2011 (for some figures, data prior to 2000 are unavailable). FPDS is the primary source of data on government contract obligations. All dollar figures in this report are in Fiscal Year 2011 dollars, and all years are fiscal years. Numbers will differ from previous Center for Strategic & International Studies (CSIS) reports on federal government services contracting, due to a change in constant dollars and to continual updates of back-year data in FPDS. However, this difference is never greater than $10 billion for any given year.

To capture the major types of DoD service activities, CSIS grouped the hundreds of government service codes (each representing a specific type of services activity) into six broad areas. This allows for an analysis of broader trends among similar activities with overlapping industrial bases. Six service areas were defined, and they are presented here with their respective FPDS product/service codes (PSCs):

- **Research & Development (R&D) –** Elements of service code A.
- **Equipment-Related Services (ERS) –** Elements of service codes J, K, N, P, V, and W.
- **Facility-Related Services & Construction (FRS&C) Services –** All of service codes E, F, M, S, X, Y, and Z, and elements of service code P.
- **Information and Communications Technology (ICT) Services –** All of service codes D, H, and L, and elements of service codes J, K, N and W.
- **Professional, Administrative, Management Services (PAMS) –** All of service codes B, C, R, T, and U, and elements of service codes A, H, and V.
- **Medical (MED) Services –** All of service codes G and Q.

Note that the DoD has its own categories of service areas, which differ from those used by CSIS. Annex 1 of this report details the differences between the two.

To analyze the industrial defense services industrial base, the CSIS team assigned each contractor in the database to one of four size categories: small, medium, large, and Big 6. Any organization designated as small by the FPDS database—according to the criteria established by the federal government—was categorized as such for the purposes of this report. Note that an organization may be identified as small for one set of contract actions but not for another as it may meet the criteria for being a small business in certain contract actions and not in others. Companies with annual revenue of more than $3 billion are classified as large. This classification is made based on their total revenue in 2011 or in the last prior year for which revenue data were available. A joint venture between two or more organizations is treated as a single separate entity. Companies with a large parent company were also defined as large. Companies that are neither small nor large are classified as medium. The Big 6 category includes Lockheed Martin, Boeing, Northrop Grumman, General Dynamics, Raytheon, and BAE Systems.

As part of the industrial base analysis, the study team made significant efforts to consolidate data related to subsidiary companies and merged companies with their parent companies. For example, while a company's subsidiaries and predecessor companies are listed separately in FPDS, they are combined into a single entry in the CSIS services database. The assignment of contractor revenue is done on an annual basis, and a merger must be completed by the end of March to be consolidated for that given fiscal year. This enabled the study team to more accurately analyze the industrial base supporting the DoD, the number of players in it, and their level of activity. The study team applied a systematic approach to these contractor "roll ups." FPDS uses hundreds of thousands of Data Universal Numbering System (DUNS) codes from Dun and Bradstreet (D&B) to identify companies but does not consistently provide parent company codes. Building on past research in identifying large companies, the CSIS team studied and classified all DUNS numbers associated with more than $250 million dollars of contract revenue in any single year between 2000 and 2011. CSIS also researched all the mergers and acquisitions by defense contractors as well as joint ventures among DoD service contractors to ensure that obligated dollars were being assigned to the correct parent companies. These efforts were supplemented by the contractor consolidation research done by Bloomberg Government, which provides consolidated lists of DUNS numbers for major contractors and regularly updates their lists to account for mergers and acquisitions. The study team cross referenced its work with Bloomberg Government for all DUNS numbers with more than $250 million in revenue and for all contractors that appear on the top 20 lists. Due to differences in classification methodology, the totals in this report will not match those of Bloomberg Government. First and foremost, Bloomberg does not keep separate records for back years and thus a merger that happened in 2010 would increase the total in 2000. For that reason, conflicts between the two systems often required detailed study and were only undertaken for those DUNS numbers with at least $250 million in revenue in a given year.

FPDS is the only comprehensive data source of government contracting activity and is more than adequate for any analysis that is focused on trends and order-of-magnitude comparisons. However, like any data source, it has its limitations. As a result, the analysis presented in this report incurs five notable restrictions:

- First, contracts obligated as part of supplemental packages are not separately classified in FPDS. As a result, this report does not distinguish between contracts funded out of the DoD base budget and those funded out of supplemental appropriations.
- Second, the analysis only covers contracts funded by and contracted through the DoD. In 2010, for example, there were $4.7 billion worth of contract dollars funded by the DoD and contracted through other agencies; almost 80 percent of these were contracted through the General Services Administration.
- Third, FPDS focuses on prime contracts, and subcontract data available from other sources is incomplete and only available for recent years. Therefore, only prime contract data are included in this report.
- Fourth, reporting regulations only require that unclassified contracts be included in FPDS. For the DoD, this omits a substantial amount of total contract dollars

obligated, perhaps as much as 10 percent. Such omissions are most noticeable in R&D contracts.

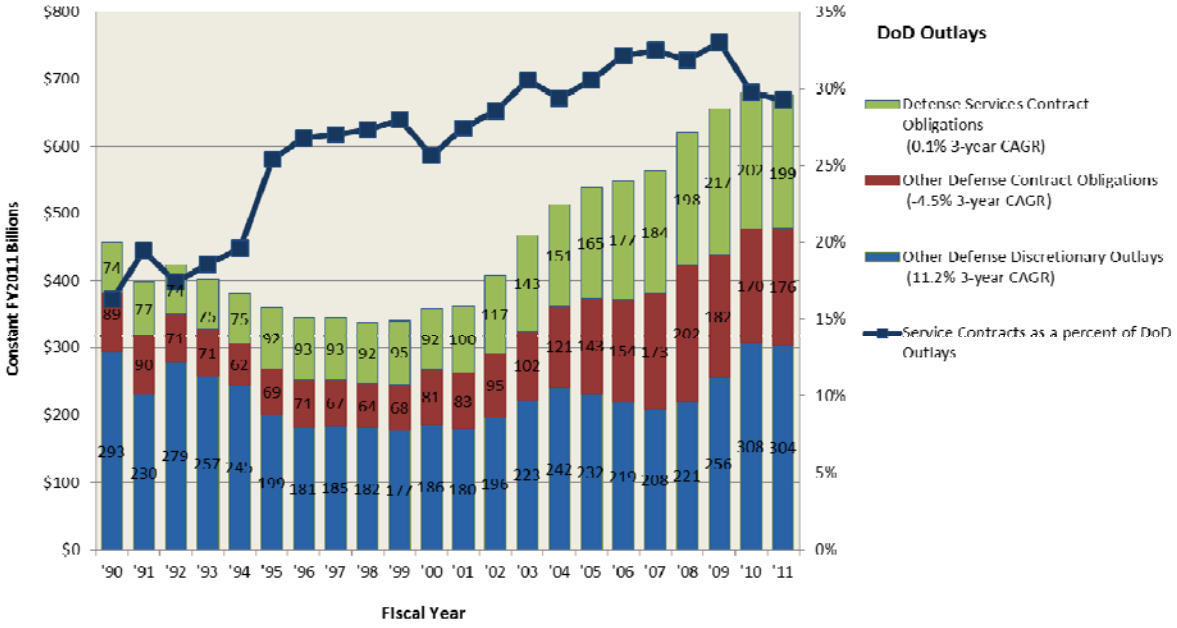
- Finally, it should be noted that classifications of contracts differs between FPDS and individual companies. For example, some contracts that a company may consider as services are labeled as products in FPDS, and vice versa. This may cause some discrepancies between companies' reports and those of the federal government.

While the above methodology applies to all of the data in this report, additional methodology notes that are specific to some sections (e.g., competition, share of market by contractor size) are presented in those sections.

# 3. Total DoD Services Contracting

In 2011, DoD dollars obligated for service contracts totaled $199 billion, accounting for almost 30 percent of total DoD outlays and 56 percent of total DoD contract obligations for that year (up from 50 percent the year before and from 48 percent in 2000). Obligations for services declined by $3 billion in 2011, while other defense contract obligations (primarily on products) increased by $6 billion, and other defense discretionary outlays decreased by $4 billion. This marks the second time in the last decade that total DoD services obligations declined year-on-year and the first time that they did so while other defense contract obligations increased.

**Figure 3-1. Topline DoD Services Contract Obligations**



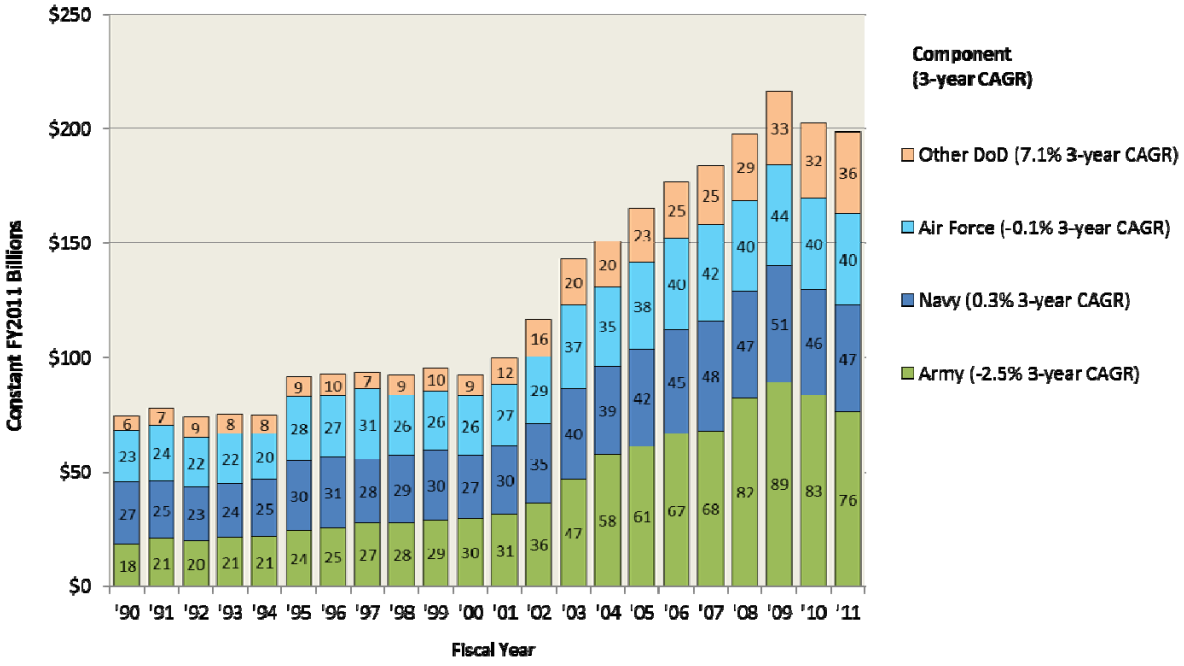

Source: https://www.FPDS.gov; OMB historical tables; CSIS analysis.
Note: CAGR is the compound annual growth rate.

The 1990s saw a 28 percent increase in total dollars obligated for defense service contracts, from $74 billion in 1990 to $95 billion in 1999. This increase occurred despite the post-Cold War defense drawdown, which saw an overall decrease of 36 percent in the DoD's budget authority. At the same time, the 1990s marked the emergence of the White House's "Reinventing Government" initiative, under which many government services were outsourced to the private sector. As a result of this initiative, the share of contract dollars obligated for services of total defense outlays increased from approximately 20 percent in 1990 to approximately 27 percent in 1999.

During the years 2000 to 2011, DoD services contract obligations increased at a compound annual growth rate (CAGR) of 7.2 percent, which is just below the 7.4 percent 11-year CAGR for all other defense contract obligations (which cover primarily DoD contracting

for products). This growth in services contracting obligations is primarily attributed to operations in Iraq and Afghanistan, both of which made extensive use of service contractors in a wide range of service areas. In the last three years of this period (2008–2011), DoD services contract obligations decreased by some $18 billion (a 9 percent decline) from a high of $217 billion in 2009. However, other defense contract obligations decreased by $26 billion (almost 13 percent) during this period (from a high of $202 billion in 2008). During this drawdown period, year-on-year growth in obligations for services was almost nonexistent (0.1 percent 3-year CAGR), while other defense contract obligations declined by a 4.5 percent CAGR. Interestingly, non-contract defense discretionary outlays increased at a 3-year CAGR of 11.2 percent during the current drawdown. As a share of total DoD outlays, service contract obligations decreased from 33 percent in 2009 to 29 percent in 2011.

**Figure 3-2. Defense Services Contract Obligations by Component**




Source: https://www.FPDS.gov; CSIS analysis.

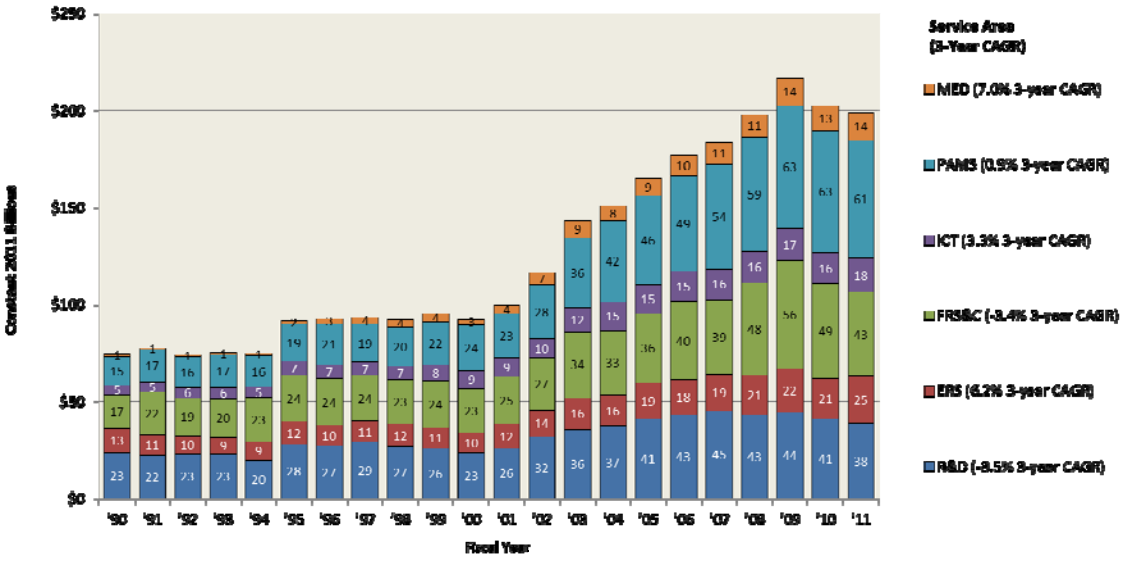
The majority of growth in service contract obligations during the 1990s occurred in the Army, which grew steadily from $18 billion in 1990 to $29 billion in 1999. Navy obligations fluctuated between a low of $23 billion and a high of $31 billion, while those of the Air Force fluctuated between $20 billion and $31 billion. The civilian DoD agencies (the "Other DoD" category) fluctuated between $6 billion and $10 billion.

Contract dollars obligated for services across the various DoD components grew at a rapid pace after 9/11, driven primarily by operations in Afghanistan and Iraq. However, this growth was not spread evenly across DoD components, and the effects of the drawdown from Iraq on services contract obligations have also been different in each. For much of the past decade, the Army was the primary driver of growth in the DoD's service contract dollar obligations, increasing at an 8.9 percent CAGR from 2000 to 2011. After reaching a peak of $89

billion in 2009, Army obligations for services decreased at a -2.5 percent 3-year CAGR, to $76 billion in 2011, largely as a result of the U.S. force drawdown in Iraq. Air Force service contract obligations increased more moderately than those of the Army, growing at an average of 3.9 percent from 2000–2011. Aside from a peak of $44 billion obligated in 2009, there was little growth in Air Force service contract dollars after 2006. Growth in Navy service contract dollars obligated for services was also slow relative to the Army's, increasing at a 5.1 percent 11-year CAGR, from $27 billion in 2000 to a peak of $51 billion in 2009. During the recent drawdown, Navy obligations decreased to $47 billion by 2011 with a 3-year CAGR of 0.3 percent.

The highest growth rate in contract dollars obligated for services occurred in the "Other" category (which includes the Defense Logistics Agency, the TRICARE Management Activity [TMA], and the Missile Defense Agency as its main elements). Obligations in this category increased at a 13 percent 11-year CAGR, from $9 billion in 2000 to $36 billion in 2011. Furthermore, unlike the three military departments, the "Other" category continued to grow after 2009, from $32 billion in 2010 to $36 billion in 2011 for a 3-year CAGR of 7.1 percent.

**Figure 3-3. Defense Services Contract Obligations by Service Area**




Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, the largest area of defense services (by dollars obligated) in most years was R&D, which fluctuated between $22 and $29 billion each year through 1999. This is consistent with trends from previous defense drawdowns (except the current one), all of which went hand in hand with growth in R&D spending. The second largest service areas were PAMS and FRS&C, while ICT and ERS were much smaller, and MED was the smallest at between $1 and $4 billion obligated each year.

For the period 2000–2011, which was primarily characterized by record defense budgets and high operational tempos in Iraq and Afghanistan, contract obligations grew in all of the six

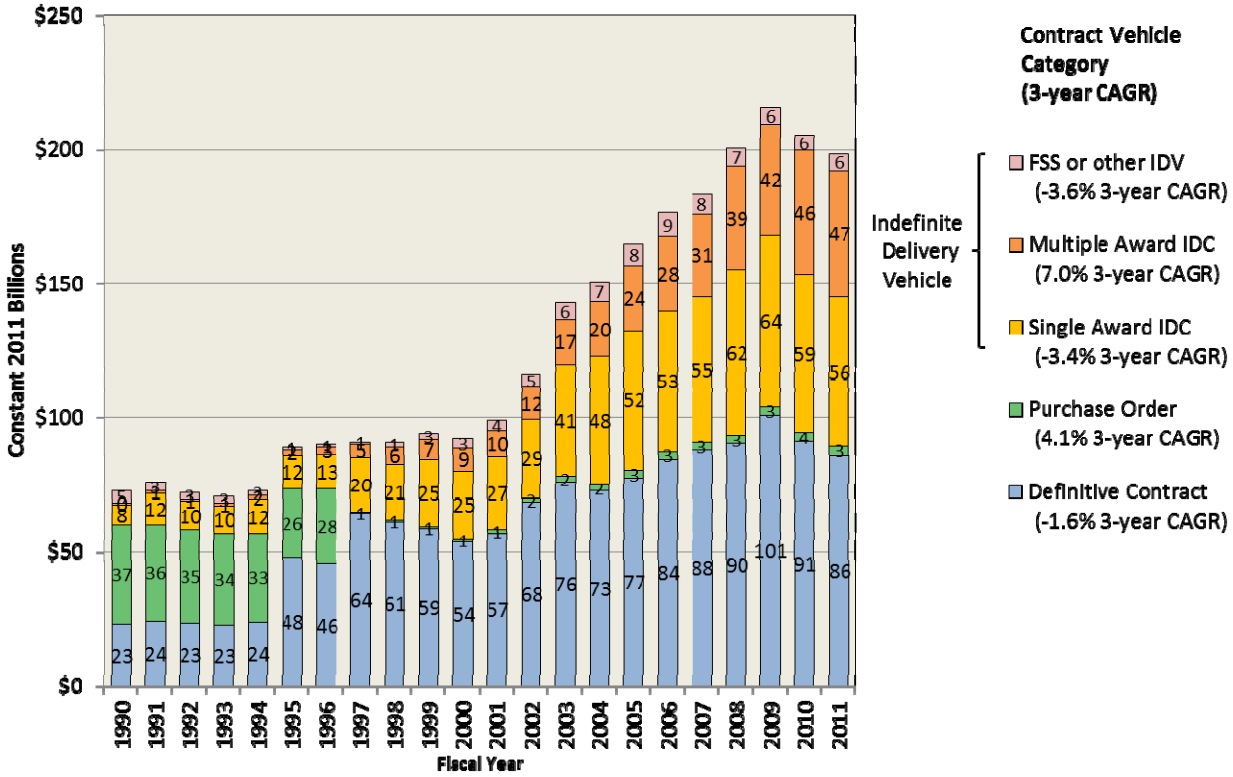
service areas. MED grew most strongly at 15.6 percent per year, followed by PAMS and ERS, with respective CAGRs of 8.9 and 8.2 percent. The share of contract dollars obligated to MED grew from 3 percent in 2000 of to 7 percent in 2011, while PAMS grew from 26 percent to 31 percent. The only other service category that saw its share of overall service contracts increase was ERS, which grew from 11.3 percent in 2000 to 12.5 percent in 2011. However, the three largest categories in terms of total dollars obligated remained PAMS, FRS&C, and R&D. For the 11-year period, R&D saw the slowest growth (4.7 percent CAGR) of any service area, though it should be noted that obligations for classified R&D contracts are not included in the FPDS data.

As defense obligations overall began decreasing in 2009, obligations in almost every service area have declined. The biggest cuts in DoD service contracts occurred in FRS&C, which fell from $55.8 billion in 2009 to $43 billion in 2011 (a -3.4 percent 3-year CAGR), largely due to reduced demand for base construction and maintenance in support of operations overseas. The second largest decrease in contract service obligations by category was in R&D, which declined from $44 billion in 2009 to $38.5 billion in 2011 (a -3.5 percent 3-year CAGR).

Despite the decline in overall DoD services contract obligations in recent years, obligations for ERS, ICT, and MED increased in 2011 over 2010. The largest of these increases occurred in ERS, which grew from $20.8 billion in 2010 to $24.7 billion in 2011. This growth can likely be attributed to higher demand for services to repair and upgrade equipment returned from Iraq and Afghanistan in anticipation of funds not being available for acquiring new hardware. ICT grew from $16.1 billion in 2010 to $17.6 billion in 2011, and MED grew from $13 billion to $14 billion. During the current drawdown, ERS, ICT, and MED contract obligations increased at respective 3-year CAGRs of 6.2 percent, 3.3 percent, and 7 percent.

Obligations for PAMS declined to $60.8 billion in 2011, from a peak of $63 billion in 2009 and 2010. This is due partly to a government-wide effort to reduce spending on management and administrative services.

**Figure 3-4. Defense Services Contract Obligations by Contract Vehicle**




Source: https://www.FPDS.gov; CSIS analysis.
Note: Contracts with unlabeled vehicles are excluded and total less than $400 million annually in every year since 2000. Total obligations may vary from other figures due to differences in download date and variations between USASpending.gov and FPDS.gov.

CSIS groups the contract vehicle types from FPDS into five categories, plus unlabeled. Definitive contracts and purchase orders are their own categories. “FSS or other IDV” is comprised of Federal Supply Schedule (FSS), Government-Wide Acquisition Contract (GWAC), Basic Ordering Agreement (BOA), and Blanket Purchasing Agreement (BPA) contract vehicle types. “Indefinite Delivery Contracts” (IDC) are divided into two types: single award and multiple award. The unlabeled category consists of both contracts with unlabeled contract vehicle type and IDCs with unlabeled award types.

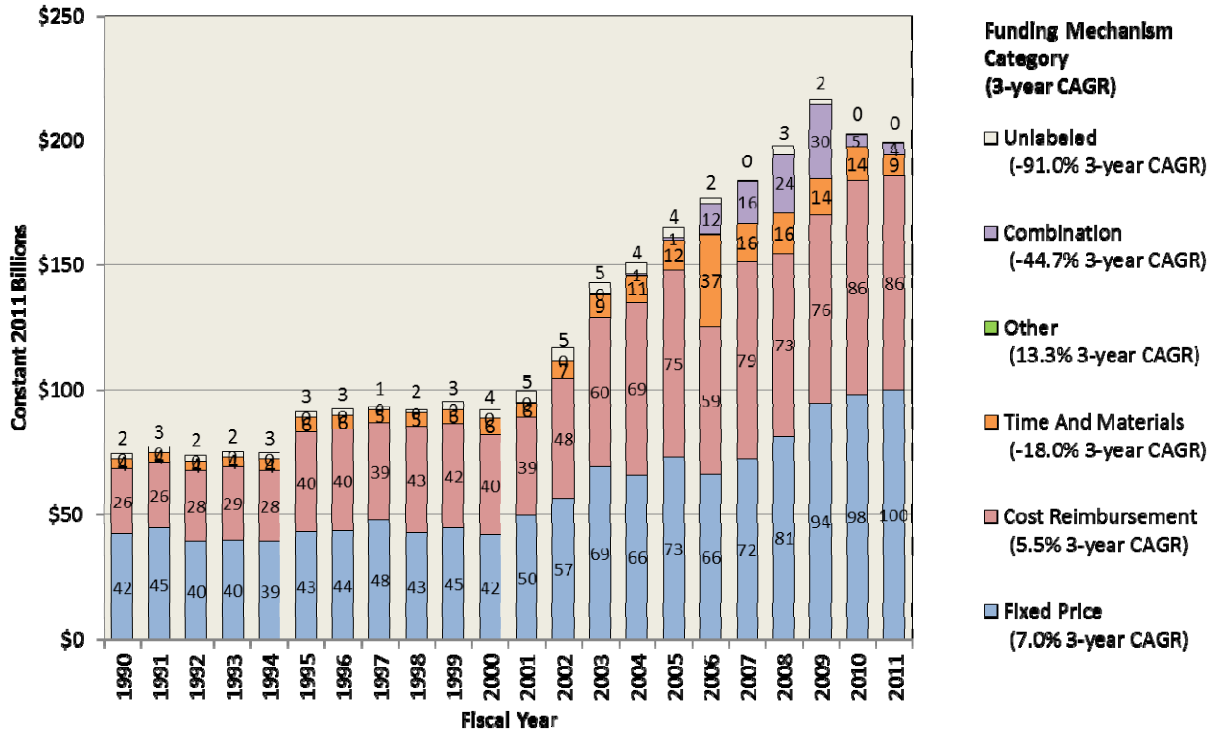
During the first half of the 1990s, there was very little change in the share of dollars obligated to the main contract vehicle categories. In 1995, however, the value of contracts obligated via definitive contracts doubled, while that of contracts obligated via purchase orders dropped by 21 percent. By 1997, the category of purchase orders had all but disappeared, and despite some growth in the single award IDC category, definitive contracts emerged as the prominent contract vehicle for defense services. In 1999, almost two-thirds of DoD dollars for services were obligated using definitive contracts, and one-third were obligated using indefinite delivery vehicles (IDVs), primarily IDCs.

During the years 2000 to 2011, preference for IDVs, primarily IDCs, grew significantly, though definitive contracts remained the preferred contract vehicle category for the majority of

DoD obligations for services. From 2000 to 2011, DoD services contract dollars obligated through definitive contract vehicles grew at a 4.3 percent 11-year CAGR, increasing from $54 billion in 2000 to $85.8 billion in 2011. However, as a proportion of DoD contract dollars spent on services, those obligated through definitive contracts declined from 58 percent in 2000 to 43 percent in 2011. In parallel, dollars obligated through all IDVs collectively (Federal Supply Schedule, Multiple Award, Single Award, and Unlabeled IDVs) grew more than twice as fast at a 10.2 percent 11-year CAGR, from $37.5 billion in 2000 to $109.4 billion in 2011. Much of the growth in IDVs over the last 12 years has been in the multiple-award IDC subcategory. Contract dollars obligated via this vehicle grew from under $9 billion in 2000 to $47 billion in 2011, at an 11-year CAGR of 16.8 percent. Meanwhile, single award IDVs grew at a 7.4 percent 11-year CAGR.

During the current budget drawdown, there was little growth in IDVs overall (a 0.6 percent 3-year CAGR). Single award IDC and FSS and Other IDV obligations declined at 3.4 percent and 3.6 percent 3-year CAGRs, respectively. Specifically, single-award IDVs fell from $64 billion in 2009 to $56 billion in 2011. Multiple award IDCs, however, grew at a 7 percent 3-year CAGR), from $42 billion in 2009 to $47 billion in 2011.

**Figure 3-5. Defense Services Contract Obligations by Funding Mechanism**




Source: https://www.FPDS.gov; CSIS analysis.

CSIS consolidates the 17 funding mechanism classifications in FPDS into six categories:

- **Fixed price** includes all fixed-price types: fixed price, fixed price award fee, fixed price incentive, fixed price redetermination, fixed price with economic price adjustment, and fixed price level of effort.
- **Cost reimbursement** includes all cost types: cost no fee, cost plus award fee, cost plus fixed fee, cost plus incentive, and cost sharing.
- **Time and materials** includes time and materials and labor hours.
- **Other** includes both other and order dependent.
- **Combination** applies to awards where two or more funding mechanism types are used.
- **Unlabeled.**

During the first half of the 1990s, the main funding mechanisms used to obligate defense service contract dollars were fixed-price and cost-reimbursement contracts, with the former accounting for some 53 percent of dollars obligated and the latter for approximately 37 percent. In 1995, dollars obligated via cost-reimbursement contracts grew significantly to account for almost half of service contract dollars obligated, with obligations via fixed-price contracts accounting for the other half. Combination contracts were almost nonexistent in the 1990s, and some $4-6 billion were obligated via time and materials contracts.

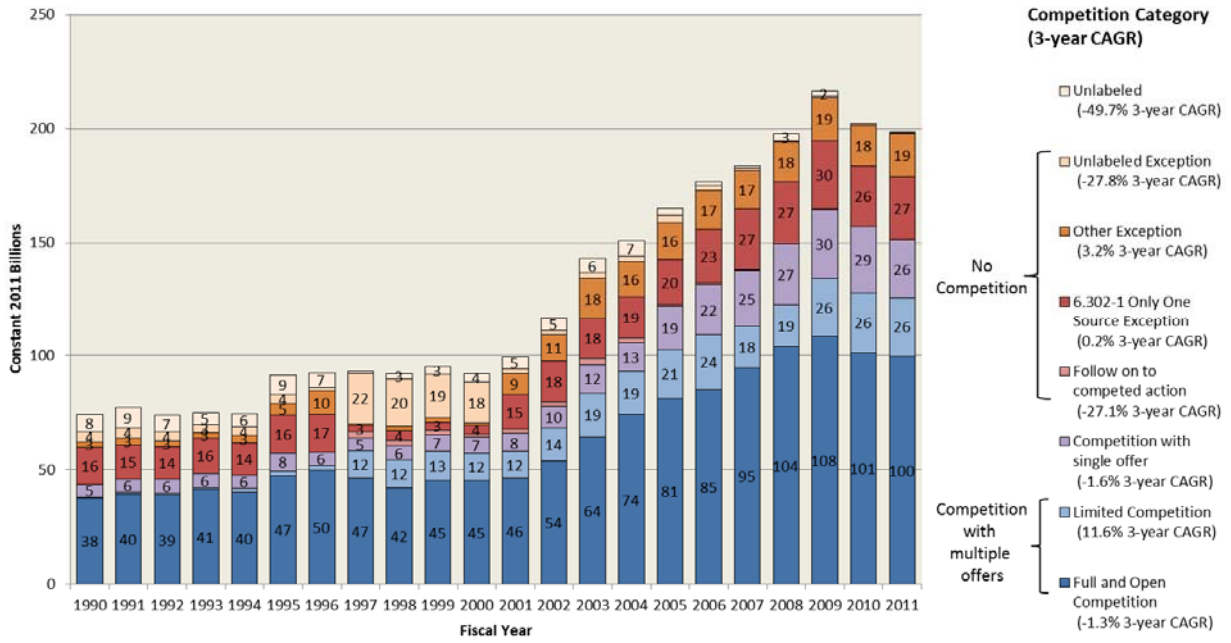
In the years 2000–2011, fixed-price contracts grew at an 8.2 percent annual growth rate compared to 7.1 percent for cost-reimbursement contracts. Within the fixed-price category, firm-fixed-price grew at an 8.3 percent 11-year CAGR but grew more slowly during the current drawdown (5.9 percent 3-year CAGR). By contrast, other fixed-price contract types, which grew at a 7.1 percent CAGR for 2000–2011, grew at over three times that rate during the current drawdown (24.8 percent 3-year CAGR).

The years 2009–2011 saw a 7 percent 3-year CAGR for fixed-price contracts and a 5.5 percent 3-year CAGR for cost-reimbursement contracts, with the former growing by $6 billion and the latter by $13 billion. This indicates a disconnect with official guidance; in a March 2009 memo to the federal contracting workforce, a Presidential memo called for increasing the use of fixed-price contracts while reducing the use of cost-reimbursement contract types. These priorities were repeated by Dr. Ashton Carter in his Better Buying Power initiative guidance of September 2010. The data show that while the use of fixed-price contracts has indeed increased, cost-reimbursement contracts are not declining, and are in fact increasing at a rate faster than that of fixed-price contracts. In the cost-reimbursement category, growth in cost-plus-incentive contracting has slowed during the current drawdown but remains robust (12.9 percent 3-year CAGR, compared to a 20.8 percent 11-year CAGR). Other cost-reimbursement contract types have grown at a more modest 4.1 percent CAGR from 2008–2011. The stronger growth in incentive fees is consistent with recent government-wide contracting policy, but the similarity in growth rates for fixed-price and cost-reimbursement contracts is not. Meanwhile, contract dollars obligated via time and materials contracts declined at an 18 percent 3-year CAGR in 2008–2011.

Contracts labeled “Combination,” which include elements of both cost-based and fixed-price contracts, declined significantly in 2009, 2010, and 2011. This is in line with current guidance and an indicator of greater focus within the DoD on data quality. Because combination contracts do not show the split between dollars obligated via fixed-price and cost-reimbursement mechanisms, their level of transparency is lower than that of other contracts. The declines in

unlabeled contracts in the last two years similarly point to a greater focus on proper data collection within the DoD.

Figure 3-6. Defense Services Contract Obligations by Competition




Source: https://www.FPDS.gov; CSIS analysis.

This analysis makes the following distinction between different types of competition: full and open competition (open competition with multiple offers), limited competition (non-open competition with multiple offers), and competition with a single offer. CSIS determines whether multiple or single offers were received for a contract by referring to the "Number of Offers Received" column in FPDS. The unlabeled category includes instances of blank entries and instances where a contract is listed as competed, but the "number of offers received" is either zero or blank.

During the 1990s, a steadily growing majority of contract dollars were obligated after competition with multiple offers, with the share increasing from 51 percent in 1990 to 61 percent in 1999. This increase ran in parallel to a decrease in unlabeled contracts, which fell from 10 percent in 1990 to 4 percent in 1999. Contract dollars obligated without competition remained at or near 30 percent throughout the decade, while contract dollars obligated after competition with a single offer hovered between 6 percent and 9 percent.

For the years 2000 to 2011, the absolute and relative levels of competition in defense services contracting increased with the number of total contract dollars for service contracts. Contract dollars obligated after competitions that received multiple offers increased by a CAGR of 7.5 percent, growing from 62 percent of all defense services contract dollars obligated in 2000 to 63 percent in 2011. Contract dollars obligated after competitions that received a single offer increased at a CAGR of 12.7 percent and grew from 7 percent of all dollars obligated to 13

percent. The overall share of competed contract actions (i.e., those in the categories of "full and open competition," "limited competition," and "competition with single offer") increased from 70 percent of defense services contract dollars in 2000 to 76 percent in 2011. Meanwhile, the share of contract dollars obligated with no competition declined from 26 percent of all obligations to 24 percent. However, it is noteworthy that most of the growth in competition occurred prior to 2008.

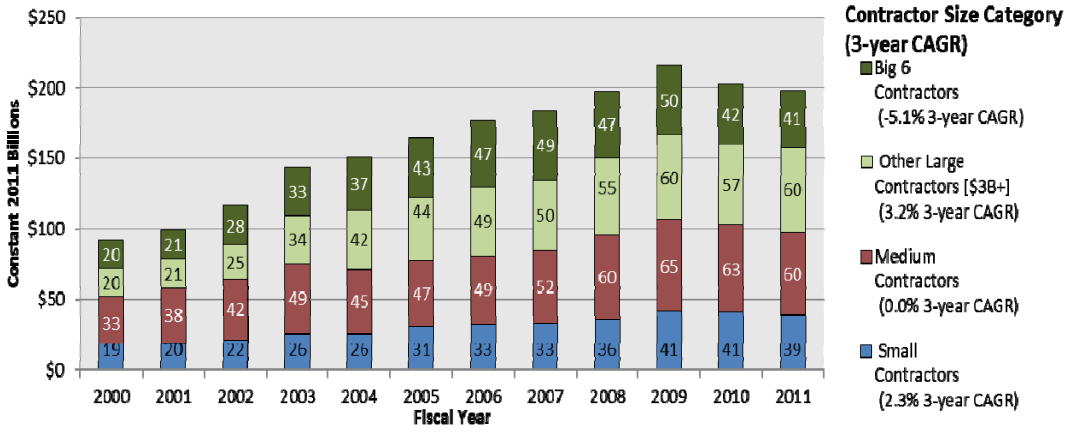
During the current drawdown, total DoD contract dollars obligated on the basis of competition decreased more than those obligated without competition. From 2008 to 2011, the CAGR for competed contract dollars was slightly lower than that for contract dollars that were not competed (0.9 percent compared and 1.1 percent, respectively). Between 2009 and 2011, contract dollars obligated after competition declined by $12 billion, while those obligated without competition declined by only $3 billion. Between 2010 and 2011, contract dollars obligated without competition increased by $3 billion while total competed contract dollars declined by $5 billion, resulting in a decrease of total competed contract dollars as a share of DoD service contract obligations from 78 percent to 76 percent, while contract dollars obligated without competition increased from 22 percent to 24 percent.

The decline in the level of competition as detailed above was the first time in the past decade that total competed contract dollars decreased as non-competed contract dollars increased year-on-year. Additionally, the increase in uncompeted contract dollars between 2010 and 2011 indicates a disconnect between the policy presented in the September 2010 Better Buying Power initiative, which encouraged the use of "real competition" (i.e., competition that receives multiple offers) in DoD contracting. Contrary to this guidance, "real competition" declined in both absolute terms and relative to uncompeted contract dollars.

In the above analysis, it should be noted that, in contrast to recent GAO reports on competition in DoD services contracts, CSIS does not include the "fair opportunity/limited sources" variable when determining extent of competition.[2] Also in contrast to the GAO, CSIS does differentiate between contracts receiving multiple bids or single bids in competition. As a result, the data presented in this report regarding competition may differ from those data presented in other government-produced reports.

[2] Government Accountability Office, "Defense Contracting: Competition for Services and Recent Initiatives to Increase Competitive Procurements," March 2012. http://www.gao.gov/assets/590/589357.pdf

**Figure 3-7. Defense Services Contract Obligations by Contractor Size**

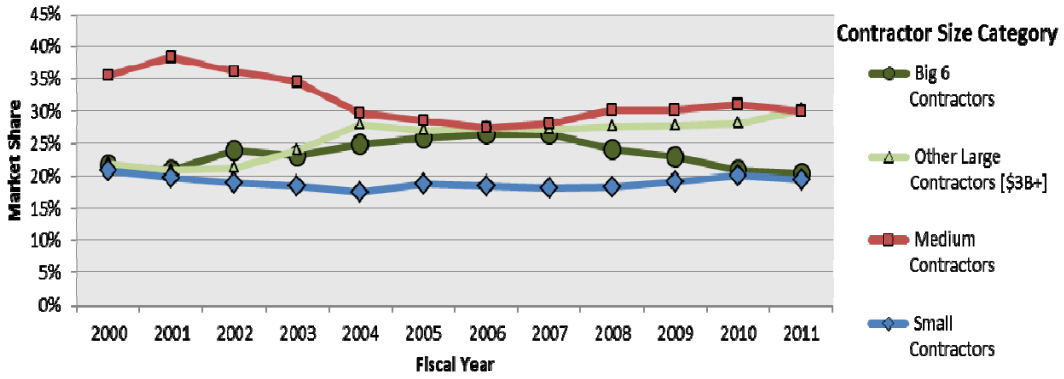



Source: https://www.FPDS.gov; CSIS analysis.

The dollars obligated and shares of dollars obligated to contractors of different sizes are shown in Figures 3-7 and 3-8, respectively. The Big 6 category includes Lockheed Martin, Boeing, Northrop Grumman, General Dynamics, Raytheon, and BAE Systems. The Other Large Contractors category includes all non-Big 6 contractors with total revenue (government and commercial) over $3 billion. The small contractor category is based on the small business determination field in FPDS, with some adjustments (as described in the Methodology section) that cause this data to possibly deviate from government small business reporting. Companies that are neither small nor large are classified as medium. Data are shown for 2000–2011 because reliable data are unavailable prior to 2000.

For the period observed (2000–2011), other large contractors had the highest growth rate with an 11-year CAGR of 10.4 percent, while contract value going to the Big 6 defense contractors (Lockheed, Boeing, Northrop, General Dynamics, Raytheon, and BAE) grew at a 6.7 percent 11-year CAGR. Other large contractors tripled in collective market value from $20 billion in 2000 to $60 billion in 2011, while the Big 6 more than doubled from $20 billion in 2000 to $41 billion in 2011. Medium-sized contractors experienced the lowest growth rate for the period, with an 11-year CAGR of 5.6 percent, but they nearly doubled their market values in 2000–2011, from $33 billion to $60 billion. Small businesses, meanwhile, increased at a 6.5 percent 11-year CAGR, growing from $19 billion in 2000 to $39 billion in 2011. For the 2008–2011 period, both small and other large contractors saw minor growth (2.3 percent and 3.2 percent 3-year CAGRs, respectively), while dollars going to the Big 6 declined (-5.1 percent 3-year CAGR). Medium-sized firms, by contrast, remained virtually stagnant during this period (-.05 percent 3-year CAGR).

**Figure 3-8. Share of Defense Services Contract Obligations by Contractor Size**




Source: https://www.FPDS.gov; CSIS analysis.

In terms of market share, Big 6 contractors declined from 22 percent of dollars obligated in 2000 to 20 percent in 2011 (having reached a high of 27 percent in 2006). Other large contractors increased from 22 percent in 2000 to 30 percent in 2011, while small businesses in 2011 received 18 percent of DoD services obligations, down from 21 percent in 2000. The share of contract dollars obligated to medium-sized contractors dropped from 36 percent in 2000 to 30 percent in 2011; since 2004, medium-sized contractors have hovered between 28 and 31 percent. This drop provides some evidence that the frequently discussed "mid-tier squeeze" is occurring in defense services contracting as it has in other federal contracting areas. Interestingly, a CSIS analysis of all federal government service contract actions shows that the "mid-tier squeeze" ended in 2007, and medium-sized companies have since regained some of their market share (though they are not yet back to 2000 levels). The defense service market, therefore, appears to be a more difficult environment for medium-sized companies.

Large companies in the defense service market appear to be faring better than all other size categories during the recent downturn in defense services contracts. From 2009 to 2011, dollars obligated to large contractors (not including the Big 6) have been relatively steady at around $60 billion per year, while dollars obligated to firms in all other size categories have declined. Meanwhile, the Big 6 declined in total market value from $50 billion to $41 billion, medium-sized contractors' total value decreased from $65 billion to $60 billion, and that of small contractors decreased from $41 billion to $39 billion.

**Table 3-1. Top 20 Defense Services Contractors, 2000 & 2011**

| Rank | Top 20 Contractors in 2000 | Obligations in 2011 Millions | | Top 20 Contractors in 2011 | Obligations in 2011 Millions |
|---|---|---|---|---|---|
| 1 | Lockheed Martin | $8,111 | | Lockheed Martin | $13,590 |
| 2 | Boeing | $4,665 | | Northrop Grumman | $8,459 |
| 3 | Raytheon | $3,082 | | Boeing | $6,018 |
| 4 | TRW | $2,104 | | Raytheon | $5,567 |
| 5 | Northrop Grumman | $1,857 | | SAIC | $4,730 |
| **Subtotal for Top 5** | | **$19,818** | | | **$38,364** |
| 6 | General Dynamics | $1,724 | | General Dynamics | $4,038 |
| 7 | SAIC | $1,680 | | L3 Communications | $3,635 |
| 8 | Computer Sciences | $1,451 | | Humana | $3,439 |
| 9 | Bechtel | $839 | | TriWest Healthcare | $3,093 |
| 10 | Halliburton | $753 | | Health Net | $2,963 |
| 11 | Foundation Health Federal Services | $643 | | ITT | $2,945 |
| 12 | Litton | $606 | | Computer Sciences Corp. | $2,926 |
| 13 | Dyncorp International | $604 | | BAE Systems | $2,891 |
| 14 | BAE Systems | $587 | | Dyncorp International | $2,861 |
| 15 | ITT | $587 | | Fluor | $2,722 |
| 16 | Newport News Shipbuilding | $582 | | Booz Allen Hamilton | $2,543 |
| 17 | FedEx | $562 | | KBR | $2,250 |
| 18 | Johns Hopkins University | $539 | | CACI | $2,219 |
| 19 | The MITRE Corporation | $523 | | URS | $1,754 |
| 20 | Booz Allen Hamilton | $514 | | Hewlett-Packard | $1,750 |
| **Total for Top 20** | | **$32,012** | | | **$80,395** |
| **Total for all industry** | | **$92,304** | | | **$198,536** |

Source: https://www.FPDS.gov; Bloomberg; CSIS analysis.

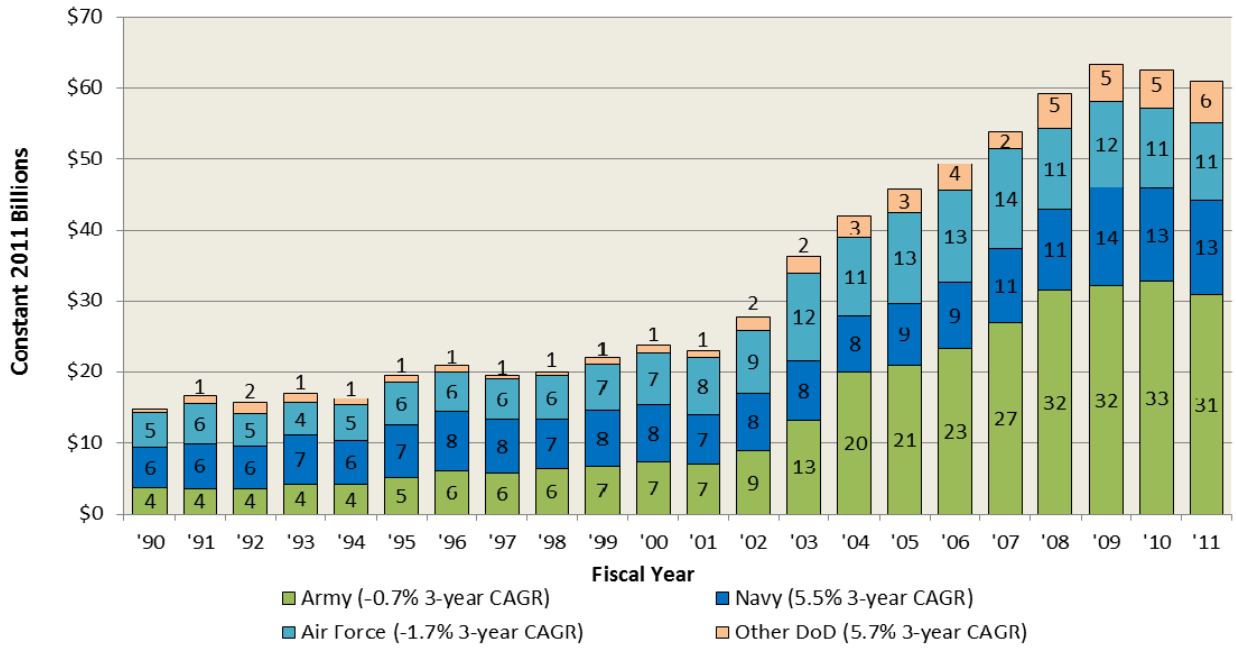
Comparing the top services contractors in 2000 and 2011 reveals several key trends. First, the makeup of the top seven defense service contractors has been stable, with the only differences between 2000 and 2011 being the disappearance of TRW (acquired by Northrop Grumman) and the entry of L3 into seventh place in 2011. However, there has been more significant change within the rest of the Top 20, with eight of the remaining contractors in 2011 being newcomers compared to 2000. Healthcare service providers account for three of these new firms: Humana, TriWest Healthcare, and Health Net. The impact of mergers and acquisitions is also evident, as three of the Top 20 contractors in 2000 were later acquired by Northrop Grumman: TRW, Litton, and Newport News Shipbuilding.

The top five contractors' share of the overall defense services market declined from 21 percent in 2000 to 19 percent in 2011, while their share of dollars obligated to the Top 20 declined from 62 percent in 2000 to 48 percent in 2011. In addition, the share of the overall market held by the Top 20 increased from 35 percent in 2000 to 40 percent in 2011.

# 4. Professional Administrative and Management Services (PAMS)

Section 4 examines trends in DoD Professional Administrative and Management Services (PAMS) from 1990–2011. This category includes all of service codes B, C, R, T, and U, and elements of service codes A, H, and V. PAMS accounted for 20 percent to 23 percent of DoD services contract obligations in the 1990s, but have steadily grown since, reaching 31 percent in 2011, the highest share of any of the service areas.

**Figure 4-1. PAMS by Customer**




Source: https://www.FPDS.gov; CSIS analysis.

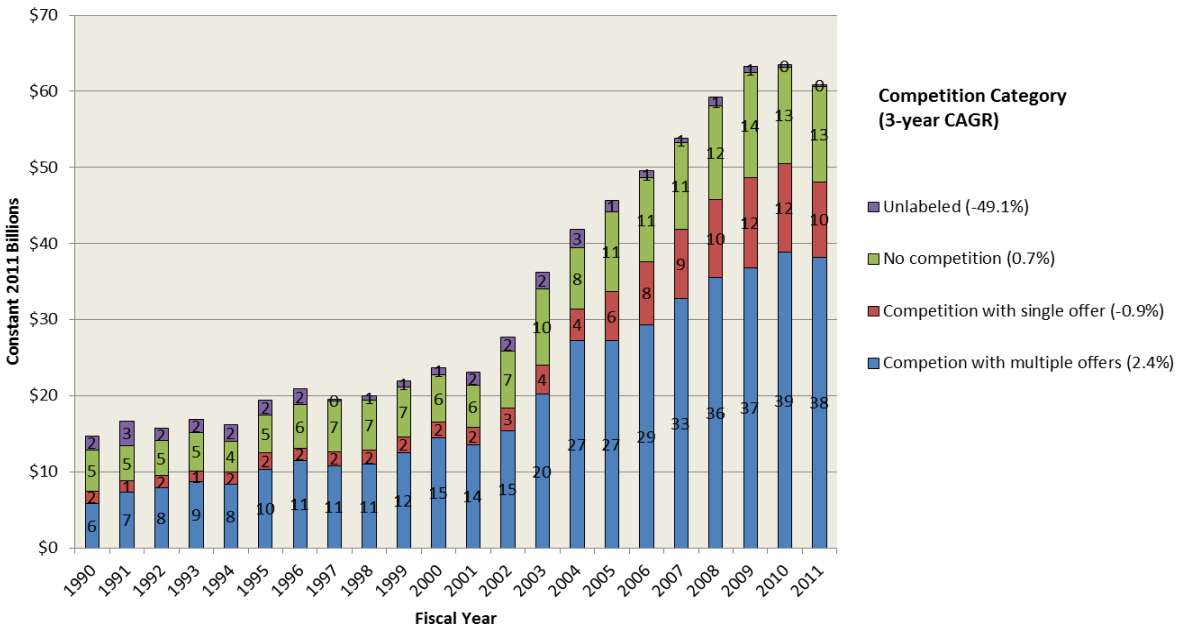
During the 1990s, the Navy held the largest share of PAMS contract obligations, accounting for between 35 percent and 41 percent, but falling off towards the end of the decade. The share of contract dollars obligated to the Air Force fluctuated throughout the decade, declining overall from 34 percent in 1990 to 30 percent in 1999. Contract dollars obligated to the Army steadily increased for most of the decade, rising from 21 percent in 1991 to 30 percent in 1999. Other DoD rose as high as 10 percent of overall PAMS contract obligations in 1992 but dropped to 4 percent by 1995 and remained at or below that level for the rest of the decade.

Trends in defense contract dollars obligated for PAMS contracts correlated strongly with U.S. contingency operations in Iraq. Prior to 2003, DoD obligations for PAMS was fairly evenly spread across the three major DoD components (Army, Navy, Air Force) and experienced little growth. Between 2002 and 2003, overall DoD obligations for PAMS surged nearly $9 billion (a 31 percent year-on-year increase), with much of this accounted for by the Army (growing from $8.9 billion to $13.3 billion) and the Air Force (growing from $8.8 billion to $12.4 billion). From

2003 to 2011, the Army's contract dollars obligated for PAMS continued to increase rapidly at a 19.5 percent CAGR, almost tripling in value to $31 billion. Meanwhile, the Navy lagged at 6.7 percent CAGR for these nine years and ended the period with $13 billion obligated for PAMS. Air Force obligations for PAMS increased at a 5 percent CAGR between 2003 and 2011, experiencing a jump of $2.5 billion between 2008 and 2009 and ending 2011 with $10.8 billion obligated for PAMS. Growth in dollars obligated for PAMS was strongest between 2003 and 2011 in Other DoD at a 24 percent CAGR, almost tripling from $2.3 billion to $5.9 billion during this time, although this component obligated the least in absolute terms for this period. Within the last four years observed, dollars obligated for PAMS by the Navy and Other DoD slowed to 5.5 percent and 5.7 percent 3-year CAGRs, respectively, while total dollars obligated by the Army for PAMS decreased at a -0.7 percent 3-year CAGR, and the Air Force declined at a -1.7 percent 3-year CAGR.

In relative terms, total Army contract dollars obligated for PAMS grew over the period observed to dominate this service area, far outpacing the growth in Navy or Air Force obligations. Each of the three major military components accounted for roughly one-third of total DoD contract obligations on PAMS prior to 2003. After this point, the Army's share of PAMS dollars obligated by the DoD increased quickly to 53 percent by 2008, dwarfing the 22 and 19 percent accounted for by the Navy and Air Force, respectively. By 2011, the Army accounted for 51 percent of total DoD obligations for PAMS, compared to the 22 percent accounted for by the Navy and the Air Force's 18 percent. The share of PAMS contract dollars held by Other DoD during this time, like its growth in absolute terms, doubled between 2000 and 2011, from 5 percent to 10 percent.

**Figure 4-2. PAMS by Competition**



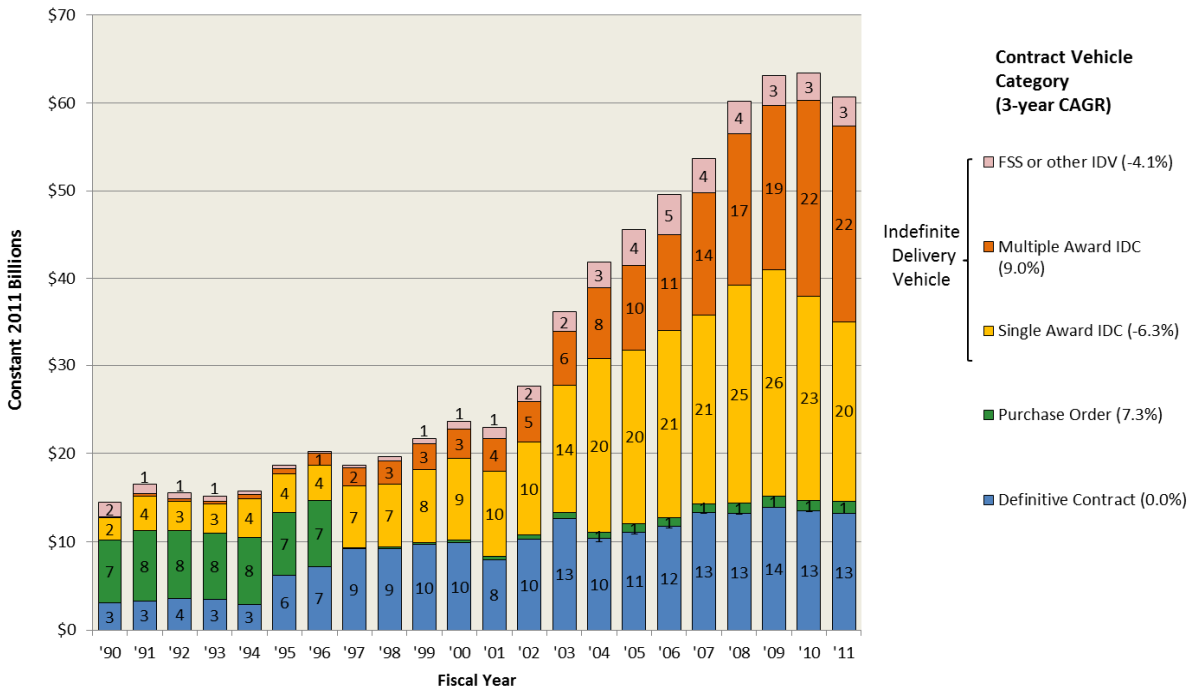

Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, a growing majority of contract dollars were obligated after competition with multiple offers, rising from 40 percent in 2000 to 57 percent in 1999. Contract dollars obligated without competition fluctuated throughout the decade but declined overall, from 37 percent in 1990 to 30 percent in 1999. Contract dollars obligated after competition with a single offer have hovered between 8 percent and 11 percent throughout the decade. Unlabeled, which accounted for as much as 19 percent of PAMS contract obligations (in 1991), and over 10 percent from 1990–1996, dropped to below 4 percent for the rest of the decade.

For most of the period 2000–2011, the growth in defense contract dollars obligated for PAMS after undergoing competition outpaced the growth in PAMS contract dollars obligated without competition. Contract dollars receiving multiple bids far exceeded those receiving only one bid in competition and accounted for well over half of the total contract dollars spent on PAMS in each year observed. In absolute terms, contract dollars obligated for PAMS after receiving multiple offers increased at a 9.2 percent 11-year CAGR, rising from $14.5 billion to $38.2 billion during this time. Meanwhile, contract dollars obligated after competition with a single offer in competition, while remaining relatively low in comparison to uncompleted dollars and those receiving multiple offers, increased at a 15.5 percent 11-year CAGR. Whereas this category amounted to $2 billion in 2000, it increased to five times that amount by 2011. Uncompeted defense contract dollars obligated for PAMS, meanwhile, increased at a 6.6 percent 11-year CAGR, rising from $6.2 billion to $12.6 billion over the period observed. Finally, contract dollars for which the level of competition is unknown (due to this field being left blank in the FPDS database) accounted for only $1 billion to $2.5 billion between 2000 and 2008, and have since all but disappeared.

In relative terms, contract dollars obligated after receiving multiple offers in competition accounted for the majority of total PAMS contract dollars, claiming upward of 65 percent at its peak in 2004, and hovering around 60 percent in the remainder of the period. Meanwhile, the share of total dollars obligated after having received a single offer in competition increased from 9 percent in 2000 to 16 percent in 2011, with most of this growth occurring post-2004. Contract dollars obligated for PAMS without having undergone competition decreased in relation to the other categories of competition, particularly after 2004, decreasing from 26 percent in 2000 to 21 percent in 2011.

**Figure 4-3. PAMS by Contract Vehicle**



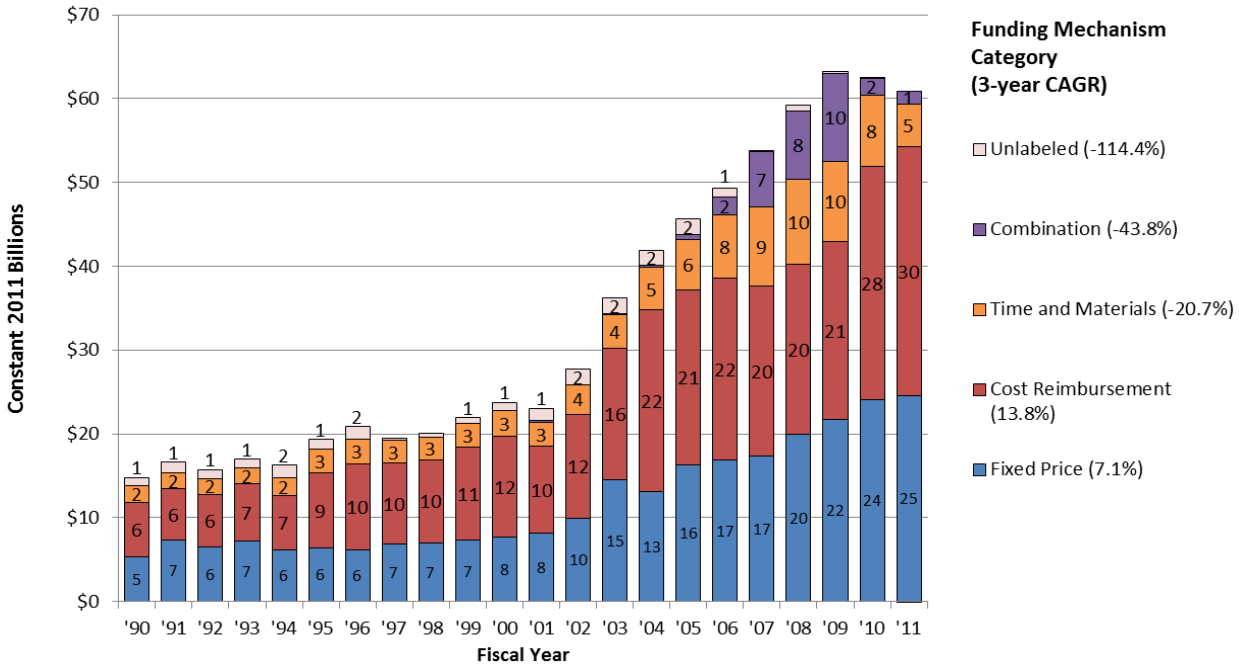

Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, purchase orders accounted for half of PAMS contract dollars obligated in the first half of the decade but dropped off sharply after that, falling to 1 percent by 1997. In parallel, contract dollars obligated under definitive contracts rose from 21 percent in 1990 to 45 percent by 1999. Similarly, contract dollars obligated under single award IDCs rose from 17 percent in 1990 to 38 percent in 1999, and those obligated under multiple award IDCs rose from 1 percent in 1990 to 13 percent in 1999. FSS and other IDVs, which accounted for 11 percent of PAMS contract dollars obligated in 1990, declined to 3 percent by 1999.

Between 2000 and 2011, IDCs became the predominant vehicle for PAMS in terms of total contract dollars obligated, with multiple award IDCs replacing single award IDCs as the favored vehicle within the last years observed. At the beginning of the decade, more contract dollars for PAMS were obligated through definitive contract vehicles ($10 billion, or 42 percent, of total contract dollars) than for any other category of contract vehicles. Over the next ten years, however, the average annual growth in total dollars obligated through multiple award IDCs and single award IDCs (7.5 percent and 19 percent 11-year CAGRs, respectively) outpaced the growth in those obligated through definitive contracts (2.7 percent 11-year CAGR). Between 2008 and 2011, the total value of single-award IDCs for PAMS contracts declined at a -6.3 percent 3-year CAGR (from $25 billion to $20 billion), while that of multiple-award IDCs grew at a 9 percent 3-year CAGR (from $17 billion to $22 billion). As a result, by the end of 2011, 22 percent of all contract dollars for PAMS were obligated through definitive contracts, while 34 percent were obligated through single-award IDCs and 37 percent were obligated through multiple-award IDCs.

FSS and other IDVs have grown from less than a billion dollars in 2000 to a high of $4.6 billion in 2006, though they subsequently declined to $3.3 billion by 2011. For the 2000–2011 period, FSS and other IDVs grew at a 12.6 percent 11-year CAGR, but between 2008 and 2011, they declined at a -4.1 percent 3-year CAGR. FSS and other IDVs accounted for only 4 percent of total services contract dollars in 2000 but rose to account for 9 percent by 2006; by 2011, however, the share of contract dollars going to FSS and other IDVs had dropped to 5 percent. Contract value going to purchase orders has more than quadrupled from 2000 to 2011, rising from $330 million in 2000 to $1.4 billion in 2011 (14 percent 11-year CAGR). This growth has slowed during the current budget drawdown, but for the 2008–2011 period, purchase orders have still grown at a 7.3 percent 3-year CAGR. Purchase orders have never accounted for more than 2 percent of total contract value.

**Figure 4-4. PAMS by Funding Mechanism**




Source: https://www.FPDS.gov; CSIS analysis.

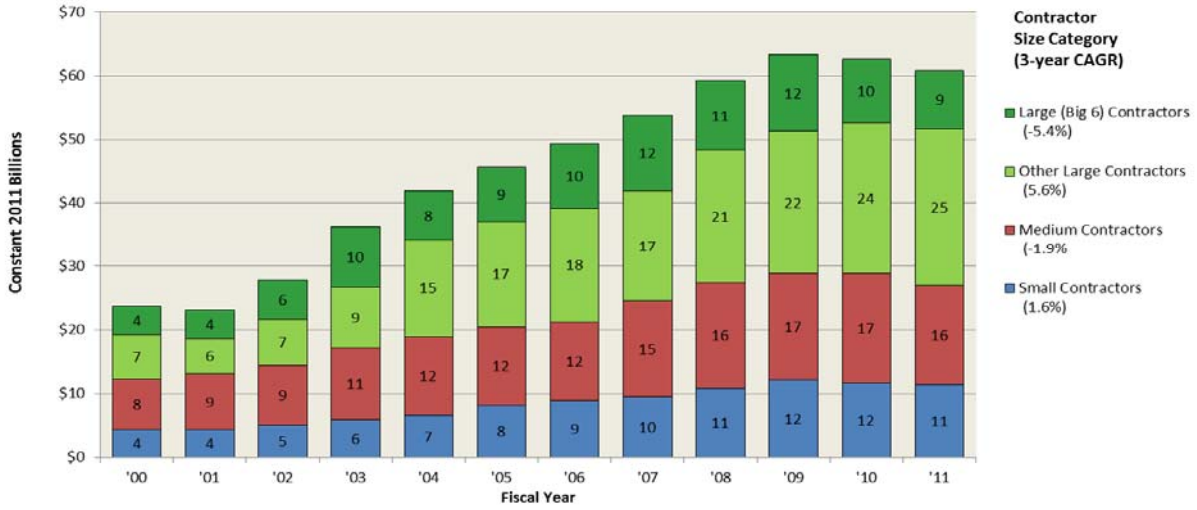
During the 1990s, cost-reimbursement contracts accounted for a growing majority of PAMS contract obligations, rising from 44 percent in 1990 to 51 percent in 1999. Fixed-price contracts rose from 36 percent in 1990 to 44 percent in 1991 but declined through the rest of the decade, to 33 percent in 1999. Time and materials contracts accounted for between 11 percent and 15 percent of contract obligations throughout the decade. Unlabeled contracts accounted for between 6 percent and 9 percent of contract obligations from 1990–1996 but dropped to below 3 percent for the rest of the decade. And combination contracts were not a major factor during the 1990s.

Between 2000 and 2011, the growth in defense-related PAMS contract dollars funded through fixed-price contracts outpaced that of cost-reimbursement contracts, although the latter

category recently started to exceed the former's growth rate to put it ahead in absolute terms after 2008. Growing at an 11.2 percent 11-year CAGR, PAMS contract dollars funded by a fixed-price mechanism more than tripled from $7.6 billion to $24.5 billion between 2000 and 2011. While dollars funded through cost-reimbursement schemes did not rise as quickly (at an 8.6 percent 11-year CAGR), they surpassed the total fixed-price dollars in every year except 2009. Over the past three years observed, this gap grew far wider, as the total value of cost-reimbursement contracts for PAMS increased at a 13.8 percent 3-year CAGR from 2008 to 2011, while fixed-price contracts slowed to 7.1 percent 3-year CAGR.

While the usage of cost-reimbursement contracts (measured by total dollars obligated) accelerated in recent years, the DoD's usage of time and materials contracts (a type of cost-reimbursement that places greater risk on the part of the federal government) and combination contracts has declined in the PAMS sector. Between 2008 and 2011, the total dollar value of time and materials contracts decreased by half from an 11-year peak of over $10 billion down to $5 billion (-20.7 percent 11-year CAGR). Combination contracts for PAMS decreased in value from over $8 billion to only $1.5 billion during these same three years, declining at a -43.8 percent 11-year CAGR as the DoD has followed guidance to tighten contracting practices and eliminate combination contracts that reduce transparency.

**Figure 4-5. PAMS by Contractor Size**




Source: https://www.FPDS.gov; CSIS analysis.

During the years 2000 to 2011, large companies claimed an increasingly larger share of contract dollars obligated by the DoD for PAMS, accounting for the majority of contract dollars in this service category by the mid-2000s. While all contractor size categories grew in value during this period (until 2009 when growth slowed), other large companies grew their share at a 12.2 percent 11-year CAGR, compared to small companies' 9.1 percent 11-year CAGR, medium-sized companies' 6.4 percent 11-year CAGR, and the Big 6's 6.8 percent 11-year CAGR. This disparity grew even more pronounced between 2008 and 2011, as total PAMS

contract dollars increased by a 0.9 percent 3-year CAGR, small companies' total value grew by an average annual 1.6 percent, medium-sized companies' total value decreased by 1.9 percent year-on-year, and the Big 6 saw their total value decrease by a -5.4 percent 3-year CAGR. Meanwhile, other large companies grew at a 5.6 percent 3-year CAGR. In absolute terms, large companies grew from $21 billion to $24.7 billion during the current budget downturn, while small companies' increased their combined value slightly, from $10.9 billion to $11.4 billion, medium-sized companies decreased in total value from $16.5 billion to $15.5 billion, and the Big 6 fell from $10.9 billion to $9.2 billion. The share of PAMS contract value going to the Big 6 dropped from 18 percent in 2008 to 15 percent in 2011, while the share going to other large contractors increased from 35 percent in 2008 to 41 percent in 2011. These trends highlight a significant squeeze on medium-sized PAMS companies providing services to the DoD, particularly during the downturn in DoD contract dollars obligated since 2008, along with similar pressure on the Big 6.

**Table 4-1. PAMS by Top 20 Contractors**

| Rank | Top 20 Contractors in 2000 | Obligations in 2011 Millions | | Top 20 Contractors in 2011 | Obligations in 2011 Millions |
|---|---|---|---|---|---|
| 1 | TRW | $1,381 | | Fluor | $2,624 |
| 2 | Lockheed Martin | $1,365 | | Northrop Grumman | $2,537 |
| 3 | Raytheon | $1,236 | | Lockheed Martin | $2,438 |
| 4 | Boeing | $807 | | SAIC | $2,413 |
| 5 | SAIC | $723 | | Dyncorp International | $2,243 |
| **Subtotal for Top 5** | | $5,511 | | | **$12,254** |
| 6 | Halliburton | $625 | | KBR | $2,174 |
| 7 | Computer Sciences | $525 | | CACI | $1,523 |
| 8 | FedEx | $485 | | L3 Communications | $1,512 |
| 9 | General Dynamics | $456 | | Computer Sciences Corp. | $1,506 |
| 10 | Jacobs Engineering Group | $388 | | Booz Allen Hamilton | $1,270 |
| 11 | BAE Ssystems | $338 | | Boeing | $1,232 |
| 12 | Northrop Grumman | $289 | | Bechtel | $1,095 |
| 13 | ARINC | $268 | | General Dynamics | $1,078 |
| 14 | Litton | $267 | | Raytheon | $1,040 |
| 15 | URS | $261 | | ITT | $1,027 |
| 16 | Booz Allen Hamilton | $256 | | ManTech International | $980 |
| 17 | Anteon | $201 | | BAE Systems | $891 |
| 18 | Con-Way | $190 | | Mission Essential Personnel, LLC | $690 |
| 19 | CACI | $162 | | URS | $667 |
| 20 | RAND | $161 | | FedEx | $659 |
| **Total for Top 20** | | **$10,382** | | | **$29,597** |
| **Total for PAMS** | | **$23,728** | | | **$60,835** |

Source: https://www.FPDS.gov; Bloomberg; CSIS analysis.

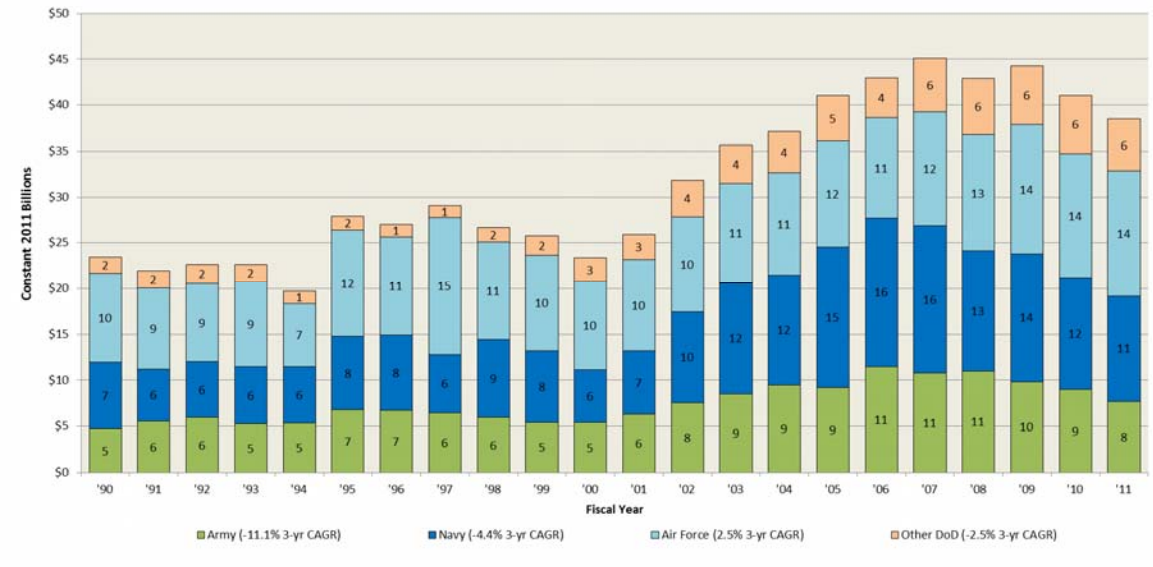
Between 2000 and 2011, there were significant changes in the composition of the Top 20 contractors providing PAMS to the DoD, although the distribution of contract dollars among these contractors saw little change. While Lockheed Martin, Northrop Grumman (as TRW in 2000), and SAIC remained in the Top 5 between these years, 2011 saw Dyncorp International rise into this top tier, largely due to its police force training contracts in U.S. areas of operation abroad. Additionally, Fluor climbed to the top of the PAMS market in 2011, having not even ranked on the Top 20 list in 2000. In terms of relative market share, the Top 5 for PAMS declined from 23 percent to 20 percent between 2000 and 2011, despite rising in absolute terms from $5.5 billion to $12.3 billion. Overall, the Top 20 accounted for a significantly greater

portion of the defense-related PAMS market in 2011 compared to 2000, growing from 44 percent to 49 percent and nearly tripling in value from $10.4 billion to $29.6 billion. And as a share of the Top 20, the share going to the Top 5 contractors declined sharply, from 53 percent in 2000 to 41 percent in 2011.

# 5. Research and Development (R&D) Services

Section 5 examines trends in DoD research and development (R&D) from 1990–2011. This category includes most of service code A, excluding R&D management and support services, which CSIS classifies as PAMS. R&D contract obligations accounted for between 28 percent and 32 percent of DoD services contract spending during the 1990s but have declined steadily since, to 19 percent in 2011. From 2000–2011, R&D has seen the slowest growth of any of the six service areas (4.7 percent 11-year CAGR).

**Figure 5-1. R&D by Customer**



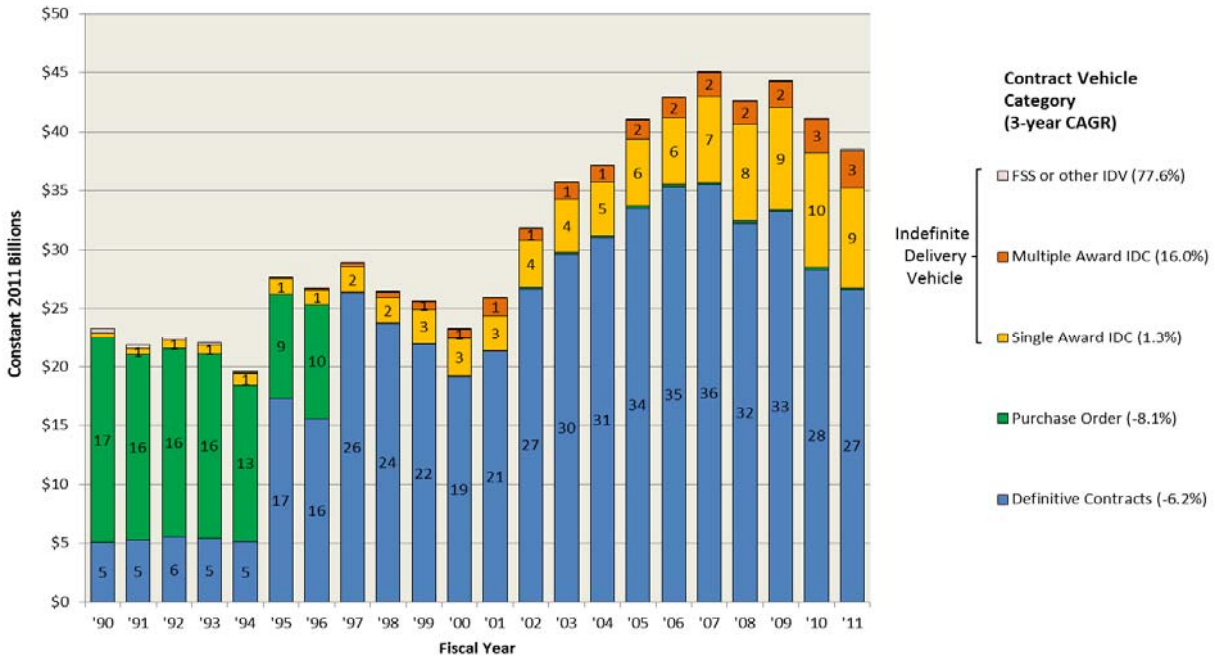

Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, the Air Force accounted for the largest share of DoD R&D contract obligations, averaging approximately 40 percent for most of the decade. Navy R&D contract obligations fluctuated between 26 percent and 31 percent of overall DoD R&D contract obligations through most of the 1990s. The Army rose from 20 percent in 1990 to 27 percent in 1994 but declined steadily afterwards, falling to 21 percent by 1999. Other DoD, meanwhile, fluctuated between 5 percent and 9 percent throughout the decade.

Starting in 2006, dollars obligated to R&D contracts declined on both Navy and Army accounts, while dollar obligations made by the Air Force remained steady or increased through 2011. This trend is a reversal from that seen during 2000 to 2006, when Air Force obligations for R&D contracts stagnated while those of the Army and Navy increased by two- and three-fold, respectively. Data from the last four years observed highlight the continuing decrease in Army and Navy obligations for R&D contracts, which declined at -11.1 percent and -4.4 percent 3-year CAGRs, respectively. Meanwhile, Air Force obligations for R&D contracts increased at a 2.5 percent 3-year CAGR, and, from 2009 onward, controlled the largest share of R&D obligations. Prior to that year, the Navy had controlled the greatest share of R&D contracts, accounting for over one-third of all contract dollars obligated for R&D by the DoD. The Army never accounted

for more than 27 percent of R&D contract dollars obligated by the DoD in any year between 2000 and 2011, and Other DoD hovered between 10 percent and 15 percent.

**Figure 5-2. R&D by Contract Vehicle**



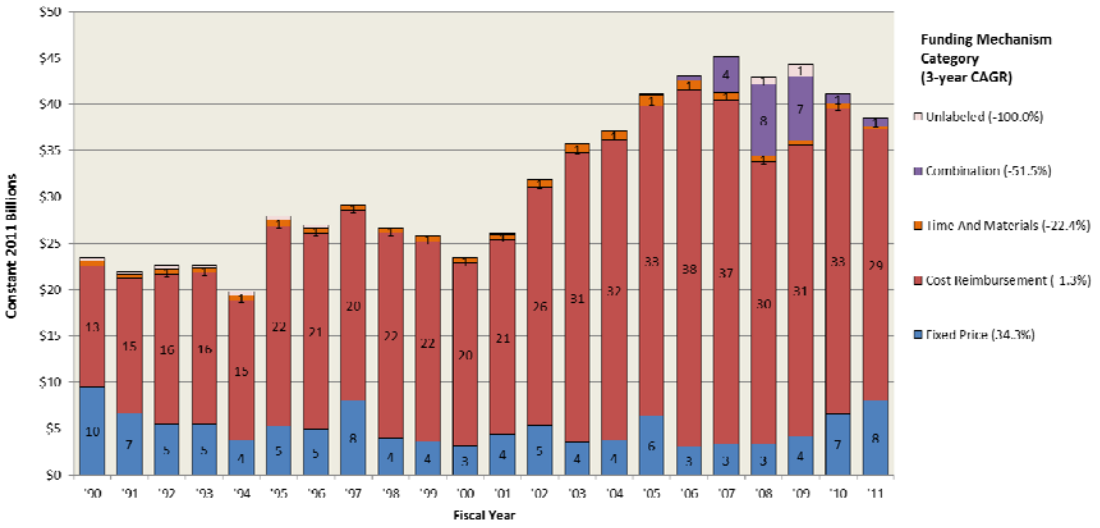

Source: https://www.FPDS.gov; CSIS analysis.

Purchase orders accounted for two-thirds to three-quarters of R&D contract obligations from1990–1994, but declined sharply afterwards, never exceeding 1 percent after 1997. Most of the contract dollars were instead obligated under definitive contracts, which rose from 22 percent of overall DoD R&D contract obligations to 85 percent by 1999. Use of single award IDCs grew significantly as well, rising from 2 percent in 1990 to 14 percent in 1999. Multiple award IDCs never accounted for more than 1 percent of DoD R&D contract obligations until 1998, rising to 3 percent by 1999. And FSS and other IDVs, which accounted for 2 percent of R&D contract obligations, never exceeded 1 percent after 1991.

For the years 2000–2011, the vast majority of R&D dollars obligated by the DoD were delivered under definitive contracts, although the most recent years of that period have seen a marked increase in IDCs. From 2000–2006, more than 80 percent of DoD contract dollars obligated for R&D services were carried out through definitive contracts, with single-award IDCs accounting for much of the remainder. After 2006, single-award IDCs became increasingly popular for R&D services purchased by the DoD, rising in total value from $5.7 billion in 2006 to a peak of $9.8 billion in 2010. Similarly, the value of multiple-award IDCs nearly tripled from $1.7 billion in 2006 to $2.8 billion in 2010. Within the same period of time, definitive contracts for R&D services decreased from $35.4 billion in 2006 to $28.3 billion in 2010, then dropped again to $26.6 billion in 2011. Over the last four years observed, the total value of R&D dollars obligated by the DoD through definitive contracts decreased at a -6.2 percent 3-year CAGR, while single-award IDCs increased at a 1.3 percent 3-year CAGR (to $8.5 billion in 2011), and

multiple-award IDCs surged at a 16 percent 3-year CAGR (to $3 billion in 2011). As of 2011, 69 percent of all R&D contract dollars were obligated under definitive contracts, with 22 percent accounted for by single award IDCs and 8 percent by multiple award IDCs. Neither purchase orders or FSS or other IDVs have exceeded $20 million in any year from 2000–2011.

**Figure 5-3. R&D by Funding Mechanism**



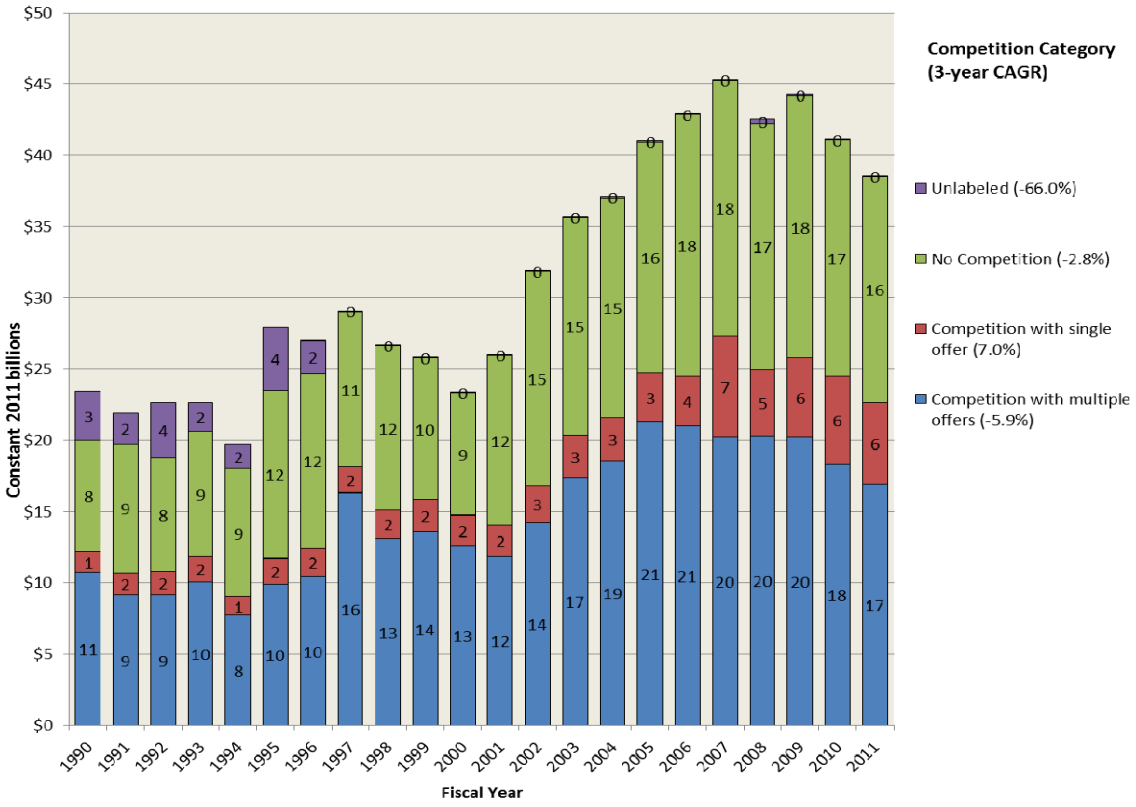

Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, a rapidly growing majority of R&D contract dollars were obligated under cost-reimbursement contract types, with the share obligated rising from 56 percent in 1990 to 84 percent in 1999. Fixed-price contract types, which accounted for 41 percent of R&D contract obligations in 1990, declined steadily throughout the decade, to 14 percent by 1999. Time and materials contracts hovered between 2 percent and 3 percent throughout the decade. Unlabeled contracts never exceeded 2 percent of R&D contract obligations, and combination contracts were not a factor during the decade.

Over the past 21 years, R&D contracts have been funded primarily through cost-reimbursement schemes, although the most recent years observed have seen a rise in fixed-price contract dollars. This trend appears to correlate with executive guidance to increase the use of such funding mechanisms. From 2000 until 2006, total contract dollars obligated through cost-reimbursement contracts for R&D services increased dramatically, almost doubling from $19.7 billion to $38.5 billion and increasing from 84 percent of all contract dollars to nearly 90 percent. However, especially over the past four years observed, the use of fixed-price contracts grew more popular within the DoD for funding R&D contracts, while the total dollar value of cost-reimbursement contracts decreased in absolute terms. The total value of cost-reimbursement contract dollars decreased at a -1.3 percent 3-year CAGR, from $30.5 billion in 2008 to $29.3 billion in 2011, while the value of fixed-price contracts surged ahead at a 34.3 percent 3-year CAGR, growing from $3.3 billion to $8 billion. Relative to other funding mechanisms, fixed-price contracts grew from 8 percent of all DoD contract dollars for R&D in 2008 to 21 percent in 2011. Meanwhile, due to their growth rate exceeding the decline in total R&D contract dollars,

the share of obligations going to cost-reimbursement contract dollars increased from 71 percent to 76 percent. Combination contracts, while rising briefly but prominently in the years 2007 through 2009, have since dropped below $1 billion in total value. Time and materials contracts, which accounted for $500 million in contract value in 2000, grew to a high of $1.2 billion in 2005, but have dropped steadily since, to $300 million in 2011.

**Figure 5-4. R&D by Competition**




Source: https://www.FPDS.gov; CSIS analysis.

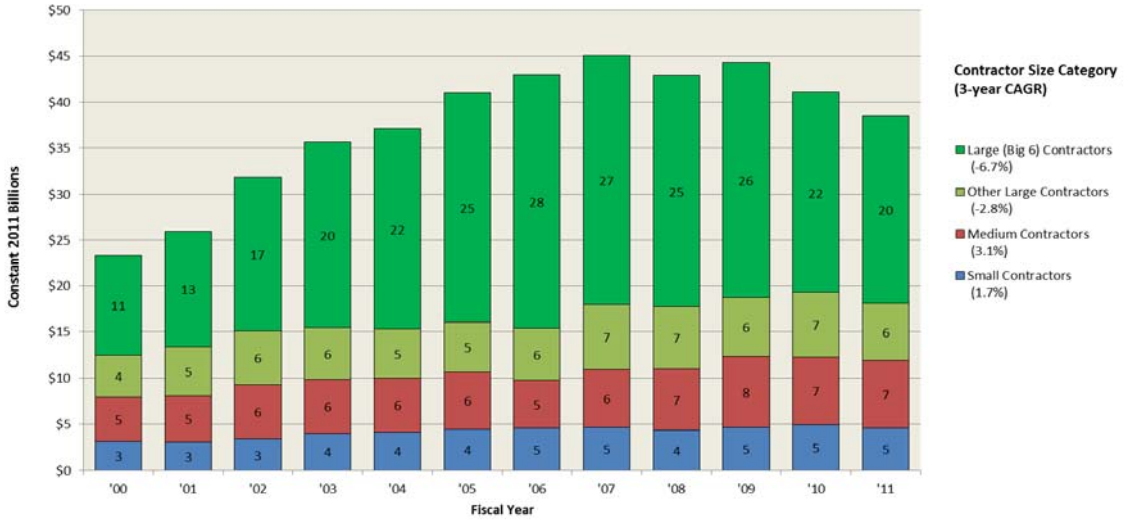
Contract dollars obligated after competition with multiple offers accounted for the largest share of R&D contract obligations in the early part of the 1990s, with 46 percent in 1990. This share declined below 40 percent from 1994–1996 but rose to 53 percent by 1999. This fluctuation contrasts with that seen in R&D contract dollars obligated without competition; accounting for 33 percent in 1990, contract dollars obligated without competition rose to exceed competition with multiple offers from 1994–1996 (at between 42 percent and 46 percent) but dropped to 39 percent by 1999. R&D contract dollars obligated after competition with a single offer grew steadily throughout the decade, from 6 percent in 1990 to 9 percent in 1999. Unlabeled, which accounted for as much as 17 percent of R&D contract obligations (in 1992), dropped sharply to below 1 percent in 1997.

From 1990–2011, the majority of contract dollars obligated for defense R&D services were obligated after undergoing competition, with the vast majority of these obligated after

having received multiple offers. However, actual growth in this category was slow in comparison with uncompeted contract dollars, which increased significantly after 2002. Between 2000 and 2011, total contract dollars obligated after receiving multiple offers increased at a 2.7 percent 11-year CAGR (growing from $12.6 billion to $16.9 billion), while contract dollars obligated after competitions receiving one offer increased much faster, at a 9.5 percent 11-year CAGR (from $2.2 billion to $5.7 billion). Uncompeted contract dollars for R&D services, meanwhile, grew at a 5.7 percent 11-year CAGR, increasing from $8.6 billion to $15.9 billion. Over the last four years observed, competed contract dollars obligated for R&D services after receiving multiple offers declined at a -5.9 percent 3-year CAGR, from $20.6 billion to $16.9 billion, while those obligated after receiving one offer in competition increased at a 7 percent 3-year CAGR, from $4.8 billion to $5.7 billion. Contract dollars obligated for R&D services without competition declined at a -2.8 3-year CAGR percent, with $15.9 billion in 2011 (just $1 billion less than multiple-offer contract dollars).

In relative terms, the share of contract dollars obligated for R&D services after receiving multiple offers in competition decreased over the past 11 years, from 54 percent in 2000 to 44 percent in 2011, while those receiving single offers in competition increased from 9 percent of all contract dollars obligated to 15 percent. Meanwhile, uncompeted contract dollars obligated for R&D increased from 37 percent to 41 percent. Within the last four years, these trends continued, as R&D service contract dollars receiving multiple offers in competition decreased from 48 percent in 2008 to 44 percent by 2011, and those receiving one offer in competition rose from 11 percent of all dollars obligated to 15 percent in this time. Meanwhile, uncompeted contract dollars increased from 40 percent of the total to 41 percent. These trends indicate a greater leveraging of competition in R&D services that has an upward trend entering the next fiscal year. However, not all of this competition is full and open, and growth has been faster in competitions receiving single offers.

**Figure 5-5. R&D by Contractor Size**




Source: https://www.FPDS.gov; CSIS analysis.

The Big 6 contractors dominated the defense R&D market from 2000–2011, although in the last three years their total dollars obligated for R&D declined while those of other large-,

medium-, and small-sized contractors held steady. For the entire period observed, the number of contract dollars obligated to the Big 6 contractors grew strongly at a 22.3 percent 11-year CAGR, increasing from $10.9 billion to $20.4 billion. At the peak of their value in 2006, the Big 6 companies controlled almost two-thirds of the defense R&D services market. By 2011, despite a significant decline (-6.7 percent 3-year CAGR), the Big 6 contractors still controlled over 53 percent of this market. Small-sized companies grew their total value at a 13.3 percent 11-year CAGR over the period 2000–2011, resulting in a gain from $3.1 billion to $4.6 billion, although their market share remained between 10 and 13 percent for this period. Medium-sized contractors grew at a 14.9 percent 11-year CAGR during the same period, increasing in total value from $4.8 billion to $7.3 billion, and grew at a 3.1 percent 3-year CAGR from 2008–2011. Medium-sized companies grew their relative market share in defense R&D services from 16 percent in 2008 to 19 percent in 2011. Other large contractors grew at an 11.4 percent 11-year CAGR, rising from $4.5 billion in 2000 to $6.2 billion in 2011. During the current downturn, contract value going to other large companies has declined at a -2.8 percent 3-year CAGR. Overall, the Big 6 companies have been claiming a smaller share of the defense R&D industry as overall DoD contract obligations in this sector have decreased, while the steady but low growth of the small and medium-sized contractors has permitted them to claim greater shares of the market.

**Table 5-1. R&D by Top 20 Contractors**

| Rank | Top 20 Contractors in 2000 | Obligations in 2011 Millions | | Top 20 Contractors in 2011 | Obligations in 2011 Millions |
|---|---|---|---|---|---|
| 1 | Lockheed Martin | $5,438 | | Lockheed Martin | $8,002 |
| 2 | Boeing | $3,144 | | Boeing | $3,982 |
| 3 | Northrop Grumman | $966 | | Northrop Grumman | $3,825 |
| 4 | Raytheon | $855 | | Raytheon | $2,865 |
| 5 | TRW | $721 | | General Dynamics | $1,297 |
| **Subtotal for Top 5** | | **$11,124** | | | **$19,971** |
| 6 | SAIC | $644 | | Booz Allen Hamilton | $1,048 |
| 7 | The Mitre | $522 | | MIT | $947 |
| 8 | Joint Venture - Boeing/UTC* | $492 | | United Technologies | $903 |
| 9 | General Dynamics | $472 | | Aerospace Corp. | $886 |
| 10 | United Tech | $452 | | SAIC | $835 |
| 11 | MIT | $441 | | Johns Hopkins APL | $727 |
| 12 | The Aerospace Corporation | $427 | | Wyle Laboratories | $527 |
| 13 | Johns Hopkins University | $332 | | JVYS* | $481 |
| 14 | Computer Sciences | $305 | | BAE Systems | $479 |
| 15 | ITT | $201 | | L3 Communications | $411 |
| 16 | Litton | $154 | | ITT | $339 |
| 17 | Textron | $153 | | MITRE | $330 |
| 18 | Institute for Defense Analyses | $117 | | CACI | $293 |
| 19 | Spectrum Astro | $113 | | Navmar | $248 |
| 20 | Gencorp | $103 | | Battelle | $221 |
| **Total for Top 20** | | **$16,053** | | | **$28,647** |
| **Total for R&D** | | **$23,348** | | | **$38,499** |

* Joint Venture
Source: https://www.FPDS.gov; Bloomberg; CSIS analysis.

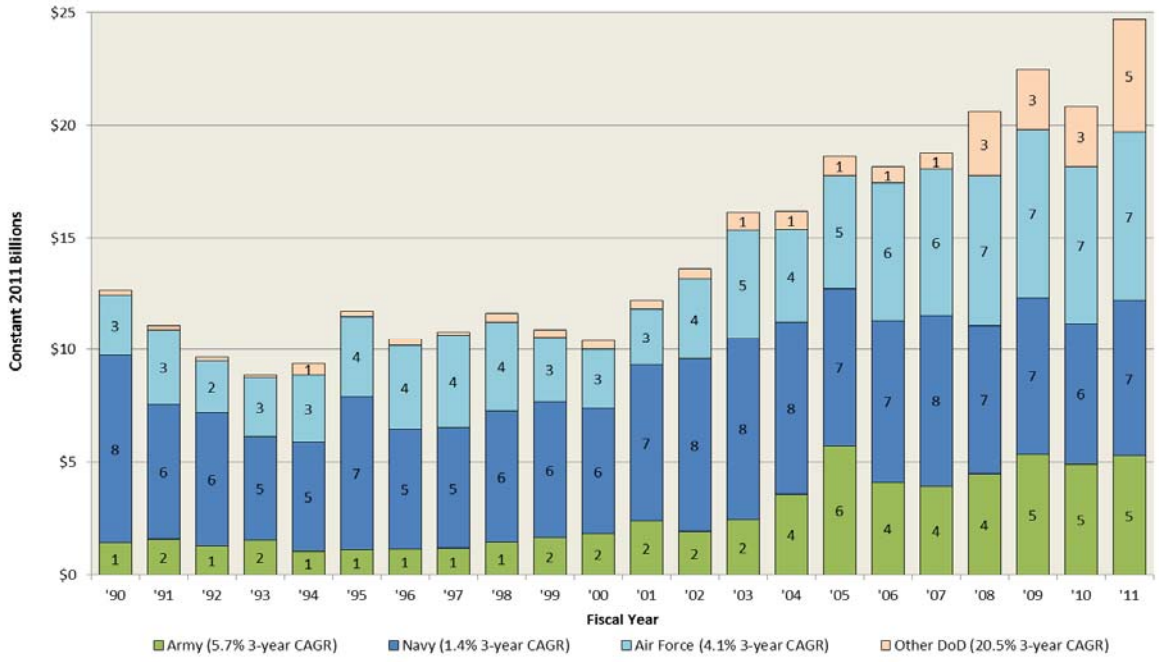
Between 2000 and 2011, the structure of the defense-related R&D contracting Top 20 saw little change, particularly in the Top 5, where four of five contractors present in the first year were also seen in the last and all top contractors are Big 6 members. Out of the contractors listed

in the Top 15 for R&D in 2000, nearly half of them remained in 2011. In terms of relative market share, the Top 5 for R&D grew from 48 percent to 52 percent, while increasing in absolute value from nearly $11 billion to almost $20 billion. These contractors accounted for a large percentage of the growth in the Top 20 overall for R&D, which grew from 69 percent to 74 percent of the total market between 2000 and 2011, or from $15.8 billion to $28.4 billion in absolute terms. As a share of the Top 20, the Top 5 controlled nearly identical shares in 2000 (69.3 percent) and 2011 (69.7 percent).

# 6. Equipment-Related Services (ERS)

Section 6 examines trends in DoD Equipment-Related Services (ERS) from 1990–2011. ERS includes elements of service codes J, K, N, P, V, and W. The share of DoD services contract dollars obligated for ERS declined steadily throughout the 1990s, dropping from 17 percent in 1990 to 11 percent in 1999. Since then, the share obligated for ERS has hovered between 10 percent and 12 percent.

**Figure 6-1. ERS by Customer**



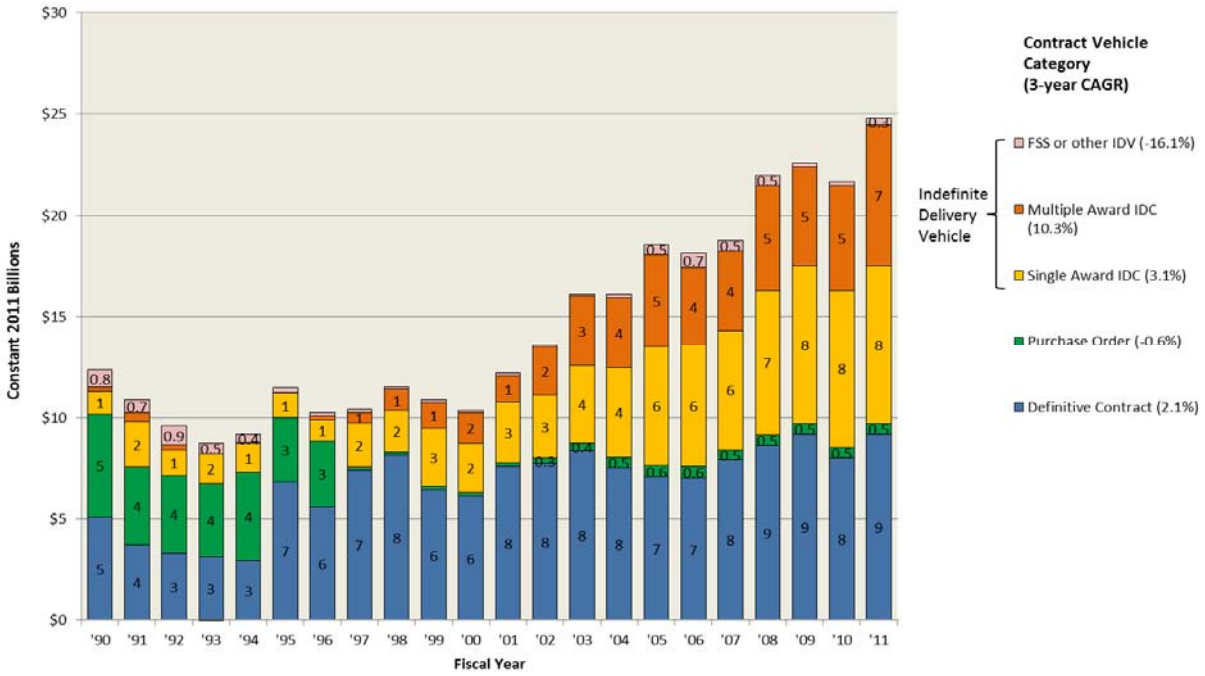

Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, over half of DoD contract dollars were obligated for the Navy. The Navy accounted for two-thirds of ERS contract obligations in 1990 but dropped to just below 50 percent by 1997, before rising back to 55 percent in 1999. The Air Force's share of ERS contract obligations grew from 21 percent in 1990 to 38 percent in 1997, before declining to 27 percent in 1999. The Army's share of ERS contract obligations grew from 11 percent in 1990 to 17 percent in 1999, with significant fluctuation in the intervening years. Other DoD, meanwhile, accounted for more than 3 percent of ERS contract obligations in only one year (6 percent in 1994).

Unsurprisingly, the major military components accounted for most dollars obligated for ERS by the DoD from 1990–2011, with the Army and Air Force increasing after the initialization of contingency operations in Iraq in 2003. From the years 2000 to 2011, Army and Air Force contract dollars obligated for ERS contracts increased at 10.3 percent and 10 percent 11-year CAGRs, respectively, resulting in growth from $1.8 billion to $5.3 billion on the Army account and $2.6 to $7.5 billion on that of the Air Force. During the same period, Navy contract obligations increased at only a 2 percent 11-year CAGR. In the last four years observed, Army

dollars obligated for ERS contracts slowed to a 5.7 percent 3-year CAGR, while that of the Air Force slowed to 4.1 percent, and the Navy barely increased its total dollars obligated, with a 1.4 percent 3-year CAGR. More notable than the trends stemming from operations in Iraq is the increase in Other DoD contract dollars obligated for ERS over the past five years observed. From 2007–2011, Other DoD obligations for ERS contracts grew from less than $1 billion in 2007 to $5 billion in 2011, growing at a 63 percent 4-year CAGR from the beginning to the end of this period. This is likely due to various systems from MDA coming online and requiring maintenance and repair. The Navy controlled the largest share of ERS contract obligations in every year until 2008, when the Air Force held an equal share. Since 2008, the Air Force has accounted for the largest share of ERS contract obligations. Other DoD, which accounted for only 4 percent of ERS obligations in 2000, surged to 14 percent in 2008 and now accounts for 20 percent of all ERS obligations.

**Figure 6-2. ERS by Contract Vehicle**

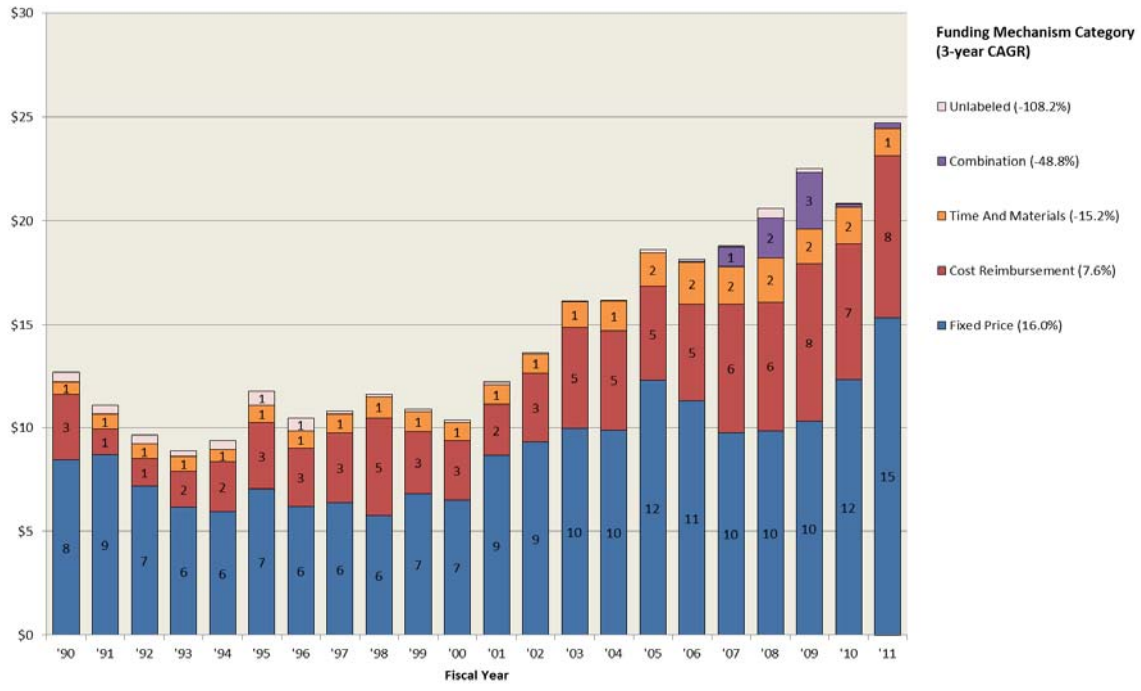



Source: https://www.FPDS.gov; CSIS analysis.

A slim majority of ERS contract dollars were obligated under purchase orders in the first half of the 1990s, with the share rising from 40 percent in 1990 to 46 percent in 1994. Purchase orders declined sharply after 1994, declining to under 2 percent from 1997–1999. Definitive contracts showed an opposite trend, declining from 40 percent in 1990 to 31 percent in 1994 but growing strongly through the rest of the decade, to a high of 71 percent in 1998. The share of ERS contract dollars obligated under Single award IDCs fluctuated throughout the decade but tripled overall, from 9 percent in 1990 to 27 percent in 1999. Multiple award IDCs accounted for less than 5 percent of ERS contract obligations from 1990–1997 but grew to 12 percent by 1999. FSS and other IDVs, which accounted for as much as 9 percent of ERS contract obligations (in 1992), declined steeply for the rest of the decade, never exceeding 2 percent from 1995–1999.

Purchase orders for defense ERS all but disappeared after 1996, despite having been used extensively for the six years prior. Those contract dollars no longer carried through purchase orders shifted to definitive contracts and single-award IDCs, while the DoD began to utilize multiple-award IDCs for ERS. Multiple-award IDCs grew rapidly in total value from 2000 onward, increasing at a 14.9 percent 11-year CAGR, growing from $1.5 billion to $6.9 billion. Meanwhile, single-award IDCs for ERS grew at an 11.2 percent 11-year CAGR, from $2.4 billion in 2000 to $7.8 billion in 2011. Growing at a 3.8 percent 11-year CAGR, the total value of definitive contracts for defense ERS grew from $6.1 billion in 2000 to $9.2 billion in 2011. These growth patterns altered the composition of contract vehicles used for ERS by the DoD over the past 11 years, as definitive contracts declined from 59 percent of dollars in 2000 to 37 percent in 2011, multiple-award IDCs almost doubled from 15 percent to 28 percent, and single-award IDCs grew from 24 percent to 32 percent of all ERS contract dollars. During the current budget drawdown, multiple award IDCs are the only category that has seen significant growth (10.3 percent 3-year CAGR), increasing their share of ERS contract obligations from 24 percent in 2008 to 28 percent in 2011. FSS and other IDVs accounted for less than $510 million in all but one year since 2000 ($690 million in 2006) and have declined at a -16.1 percent 3-year CAGR since 2008.

**Figure 6-3. ERS by Funding Mechanism**




Source: https://www.FPDS.gov; CSIS analysis.

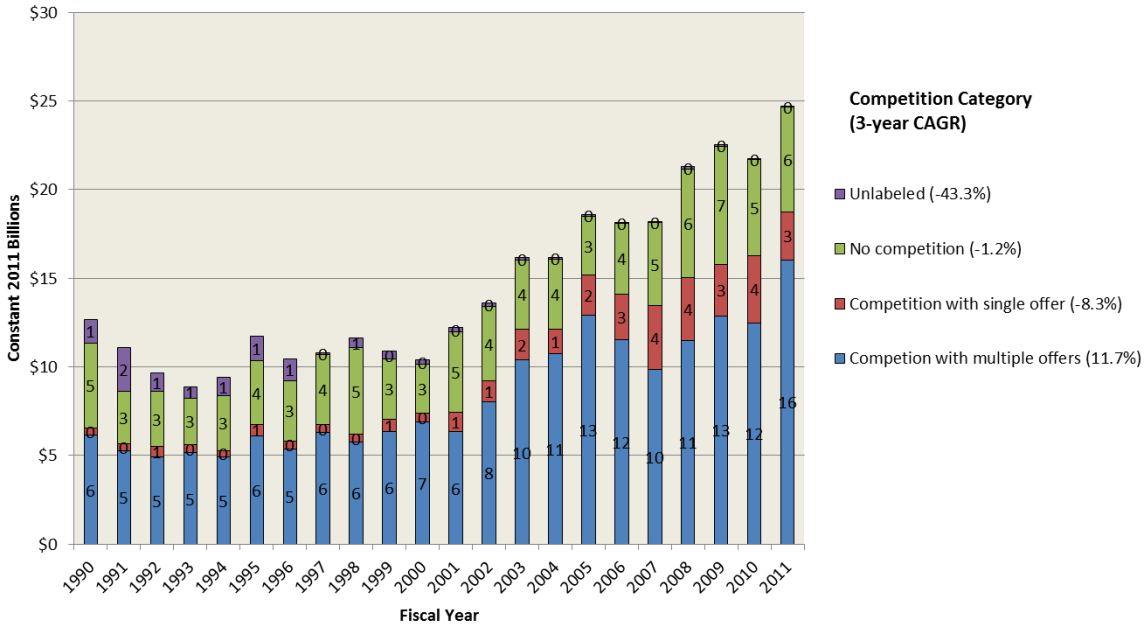
During the 1990s, more than 60 percent of ERS contract dollars were obligated under fixed-price contract types in most years but declined throughout the decade, falling from 79 percent in 1991 to less than 50 percent in 1998, before rising back to 63 percent in 1999. The share of contract dollars obligated under cost-reimbursement contract types grew through most

of the decade, rising from a low of 11 percent in 1991 to a high of 41 percent in 1998, before declining to 28 percent in 1999. ERS contract dollars obligated under time and materials contracts hovered between 6 percent and 9 percent for most of the decade. Unlabeled contracts rose from 4 percent in 1990 to 6 percent in 1996 but declined to 1 percent from 1997–1999, while combination contracts were not a major factor during the 1990s.

From 2000 until 2011, the majority of defense ERS contracts were funded through fixed-price mechanisms, although the use of cost-reimbursement mechanisms was also consistently on the rise. Growth in the total value of fixed-price mechanisms for ERS increased considerably after 2000, as it more than doubled from $6.5 billion in 2000 to $15.3 billion in 2011, at an 8.1 percent 11-year CAGR. The concurrent increase in cost-reimbursement contracts proceeded faster, growing at a 9.5 percent 11-year CAGR, from $2.9 billion in 2000 to $7.8 billion in 2011. Meanwhile, the yearly total of ERS contracts using time and materials funding mechanisms grew at a 3.7 percent 11-year CAGR, on average, from $0.9 billion to $1.3 billion.

Over the last four years observed, these trends have been particularly pronounced. Fixed-price ERS contracts collectively grew at a 16 percent 3-year CAGR, from $10 billion at the end of 2008 to $15 billion at the end of 2011. Fixed-price contracts, whose share of ERS contracts had dropped to 48 percent in 2008 (from a high of 71 percent in 2001), accounted for 62 percent in 2011. Cost-reimbursement contracts increased at a 7.6 percent 3-year CAGR, from $6.3 billion in 2008 to $7.8 billion in 2011. The share of ERS contract obligations going to cost-reimbursement contracts increased from 20 percent in 2008 to 34 percent in 2009 but has since dropped to near 2008 levels. Meanwhile, the total value of time and materials contracts for ERS decreased at a -15 percent 3-year CAGR, from $2.2 billion to $1.3 billion. As a share of ERS contract obligations, time and materials contracts declined from 11 percent in 2008 to 5 percent in 2011. Combination contract funding mechanisms briefly appeared from 2006–2009 but have since almost disappeared. These trends in ERS defense contracts reflect implementation of executive guidance to agencies to increase usage of fixed-price contract funding mechanisms.

**Figure 6-4. ERS by Competition**



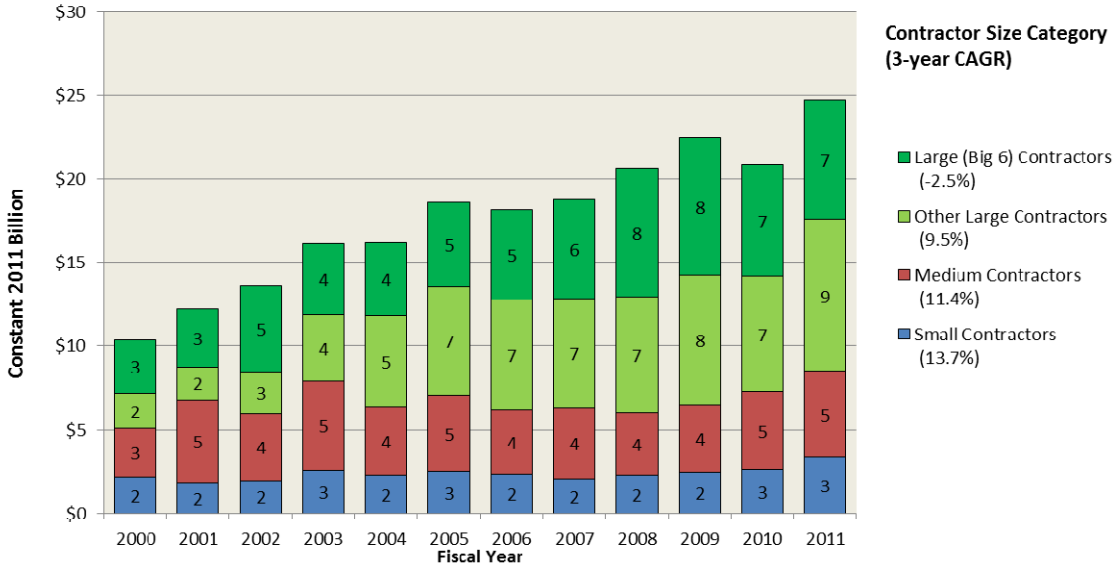

Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, more than 50 percent of ERS contract dollars were obligated after competition with multiple offers, with the share rising from 48 percent in 1990 to 58 percent in 1999. The share of ERS contract dollars obligated without competition fluctuated throughout the decade, declining overall from 38 percent in 1990 to 31 percent in 1999. Contract dollars obligated after competition with a single offer accounted for between 3 percent and 6 percent of overall DoD ERS contract obligations throughout the decade. And unlabeled, which accounted for over 10 percent of ERS contract obligations from 1990–1996, dropped off sharply in the latter part of the decade.

Between 2000 and 2011, the growth in contract dollars obligated by the DoD for ERS contracts on the basis of competition surpassed the growth in uncompeted contract dollars, but for much of the decade, competitions with a single offer grew faster than competitions with multiple offers. During this time, contract dollars obligated after receiving multiple offers in competition increased at an 8 percent 11-year CAGR, and those obligated after receiving a single offer increased at a 16.8 percent 11-year CAGR, compared to the 7.3 percent 11-year CAGR for uncompeted contract dollars. In absolute terms, contract dollars obligated for ERS after receiving multiple offers grew from $6.9 billion in 2000 to $16 billion in 2011, those obligated after receiving one offer grew from $0.5 billion to $2.7 billion, and those obligated without competition more than doubled from $2.7 billion to $5.9 billion. Within the last four years, contract dollars obligated for ERS after receiving multiple offers in competition (11.7 percent 3-year CAGR) grew faster than contract dollars obligated in competition, which declined at a -8.3 percent 3-year CAGR. During the same period, uncompeted contract dollars decreased slightly (-1.2 percent 3-year CAGR). Competitions with multiple offers, which accounted for 56 percent of ERS contract obligations in 2010 (from a high of 69 percent in 2005), increased sharply to 65 percent in 2011, while competitions receiving only a single offer declined from 18 percent in

2010 to 11 percent in 2011. Uncompeted contracts held a 24 percent share of ERS contract obligations in 2011, down from 29 percent in 2009.

**Figure 6-5. ERS by Contractor Size**




Source: https://www.FPDS.gov; CSIS analysis.

Between 2003 and 2011, the ERS market became dominated by large contractors, which squeezed small and medium-sized companies alike until the latter years of the decade. Medium-sized contractors were most severely affected between these years, as their total market share decreased by nearly half, from 41 percent in 2001 to 21 percent in 2011; during the same period, the share going to small contractors declined from 14.6 percent of the ERS market to 13.5 percent. Meanwhile, other large contractors have grown from 20 percent of the DoD ERS market in 2000 to 37 percent in 2011, while the share going to the Big 6 has declined slightly (31 percent in 2000, 29 percent in 2011). In absolute terms, between 2003 and 2011, medium-sized contractors remained nearly constant, small contractors increased from $2.6 billion to $3.3 billion, other large contractors' value more than doubled from $3.9 billion to $9.1 billion, and Big 6 contract value increased from $4.3 billion to $7.1 billion. More recently, between 2008 and 2011, small, medium, and other large contractors' market shares grew substantially at 3-year CAGRs of 13.7 percent, 11.4 percent, and 9.5 percent, respectively, while the Big 6 contractors declined at a -2.5 percent 3-year CAGR. Over the longer period 2000 to 2011, medium-sized contractors grew at a 5.2 percent 3-year CAGR, compared to small contractors' 4.1 percent 11-year CAGR, other large contractors' 14.4 percent 3-year CAGR, and the Big 6 contractors' 7.5 percent 3-year CAGR.

**Table 6-1. ERS by Top 20 Contractors**

| Rank | Top 20 Contractors in 2000 | Obligations in 2011 Millions | | Top 20 Contractors in 2011 | Obligations in 2011 Millions |
|---|---|---|---|---|---|
| 1 | Raytheon | $889 | | Lockheed Martin | $1,751 |
| 2 | Boeing | $712 | | Raytheon | $1,496 |
| 3 | Lockheed Martin | $662 | | L3 Communications | $1,353 |
| 4 | General Dynamics | $562 | | Northrop Grumman | $1,160 |
| 5 | Dyncorp International | $561 | | BAE Systems | $1,079 |
| **Subtotal for Top 5** | | **$3,386** | | | **$6,840** |
| 6 | Newport News Shipbuilding | $478 | | General Dynamics | $909 |
| 7 | AP Moller MAERSK | $464 | | FedEx | $874 |
| 8 | Northrop Grumman | $314 | | AP Moller Maersk | $800 |
| 9 | International Shipholding | $195 | | Alliance Contracting LLC* | $765 |
| 10 | Metro Machine | $182 | | Boeing | $729 |
| 11 | Southwest Marine | $175 | | United Technologies | $512 |
| 12 | Carlyle Group | $156 | | Kelly Aviation Center | $474 |
| 13 | LSI | $144 | | APL | $421 |
| 14 | American President Lines | $137 | | Dyncorp International | $421 |
| 15 | Sealift Holdings | $128 | | Computer Sciences Corp. | $405 |
| 16 | Ocean Shipholdings | $126 | | UPS | $392 |
| 17 | Honeywell | $118 | | Draper | $375 |
| 18 | URS | $116 | | ASL Aviation Group | $368 |
| 19 | Victoria Investment Group | $100 | | URS | $365 |
| 20 | American Automar | $81 | | Con-Way | $352 |
| **Total for Top 20** | | **$6,299** | | | **$15,002** |
| **Total for ERS** | | **$10,381** | | | **$24,690** |

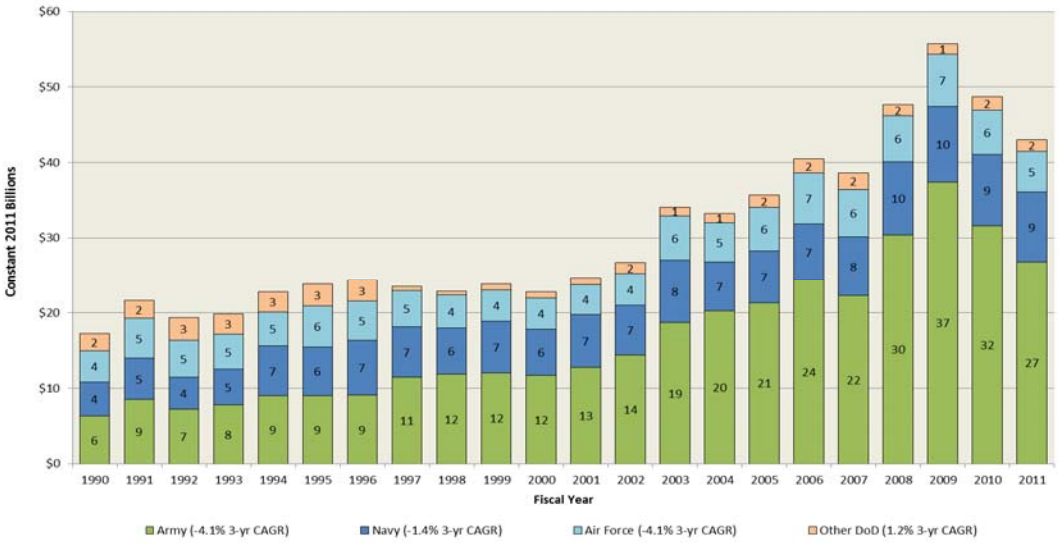
* Joint Venture
Source: https://www.FPDS.gov; Bloomberg; CSIS analysis.

The structures of the Top 20 contractors for ERS in 2000 versus 2011 reflect the U.S. material force structures in both years, as contractors providing naval and air power solutions rank highly in both years, and the latter year features a higher number of contractors providing computer system technology solutions. In the Top 5 sub-tier, only Lockheed Martin and Raytheon appear in both years, although Northrop Grumman makes an appearance as its Newport News subsidiary in 2000 (in sixth place) and then under its corporate parent name in 2011. The computer system technology company L3 Communications appears in the Top 5 after ranking below the Top 20 in 2000, as does BAE Systems. In the Top 20 overall, several naval companies, such as Ocean Shipholdings and International Shipholding, dropped out of the Top 20 between 2000 and 2011, leaving AP Moller MAERSK and the two remaining large shipbuilding companies (General Dynamics and Northrop Grumman) as the top ERS providers for these platforms. Additionally, several computer technology companies, such as United Technologies and Computer Sciences Corp., appeared within the Top 20 in both years. In total market share, the Top 5 contractors in the ERS industry held 33 percent in 2000 and 28 percent in 2011, while the Top 20 overall held 61 percent of the total ERS market in both years. As a share of the Top 20, the Top 5 held 54 percent in 2000 but only 46 percent in 2011.

# 7. Facilities-Related Services & Construction (FRS&C)

Section 7 examines trends in DoD Facilities-Related Services & Construction (FRS&C) from 1990–2011. FRS&C includes all of service codes E, F, M, S, X, Y, and Z, and elements of service code P. FRS&C accounted for between 25 percent and 28 percent of DoD services contract obligations for most of the 1990s and between 22 percent and 26 percent from 2000–2011.

**Figure 7-1. FRS&C by Customer**



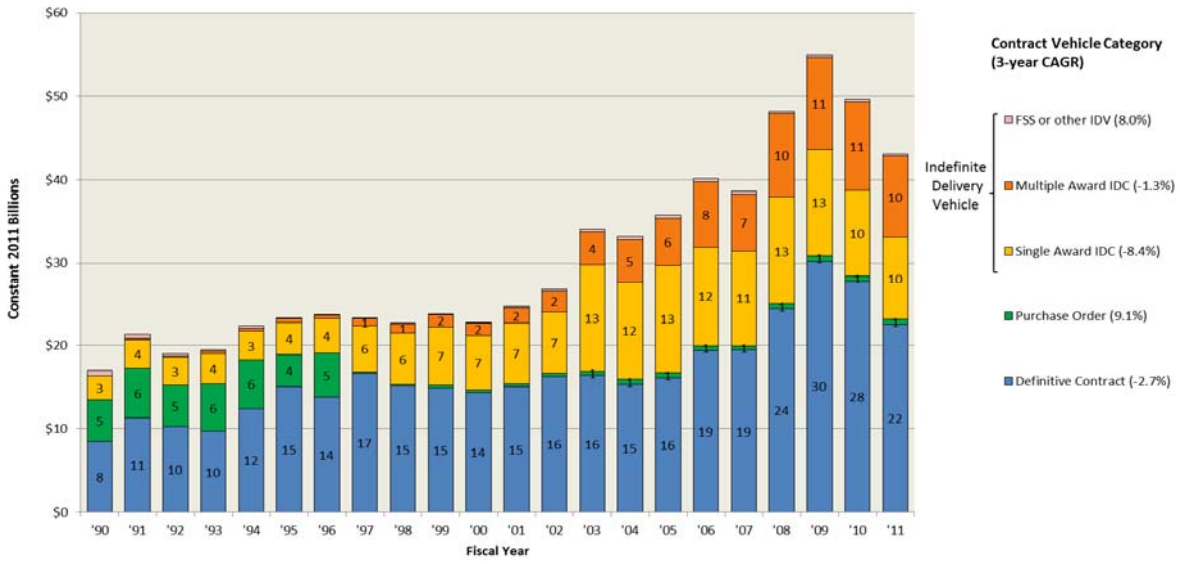

Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, the Army accounted for a growing majority of FRS&C contract obligations, rising from 37 percent in 1990 to 51 percent in 1999. The Navy accounted for approximately a quarter of FRS&C contract obligations throughout the decade. The share of FRS&C contract obligations going to the Air Force declined from 24 percent in 1990 to 18 percent in 1999. And Other DoD, which accounted for between 11 percent and 15 percent from 1990–1996, dropped to below 4 percent from 1997–1999.

DoD obligations on FRS&C began increasing rapidly after 2001, primarily due to operations in Iraq and Afghanistan. From 2000 onward, the Army held over half of all DoD contract dollars for FRS&C and continued to grow this portfolio at a 7.8 percent 11-year CAGR, increasing from $11.7 billion to $26.8 billion. By comparison, the FRS&C contracting accounts of the Navy and Air Force grew at 3.9 percent and 2.4 percent 11-year CAGRs, respectively, from 2000 to 2011. Over the last four years observed, however, Army and Air Force contract dollars obligated for FRS&C decreased at identical -4.1 percent 3-year CAGRs, compared to the -1.4 percent 3-year CAGR for the Navy account. Both the marked increase in the Army's FRS&C dollars over the last decade and its sudden decline since 2009 are clearly tied to the operations in Iraq, both on the ramp-up phases and the withdrawal phase. When U.S.

involvement in Afghanistan winds down in the coming years, this account is expected to decrease further.

**Figure 7-2. FRS&C by Vehicle**



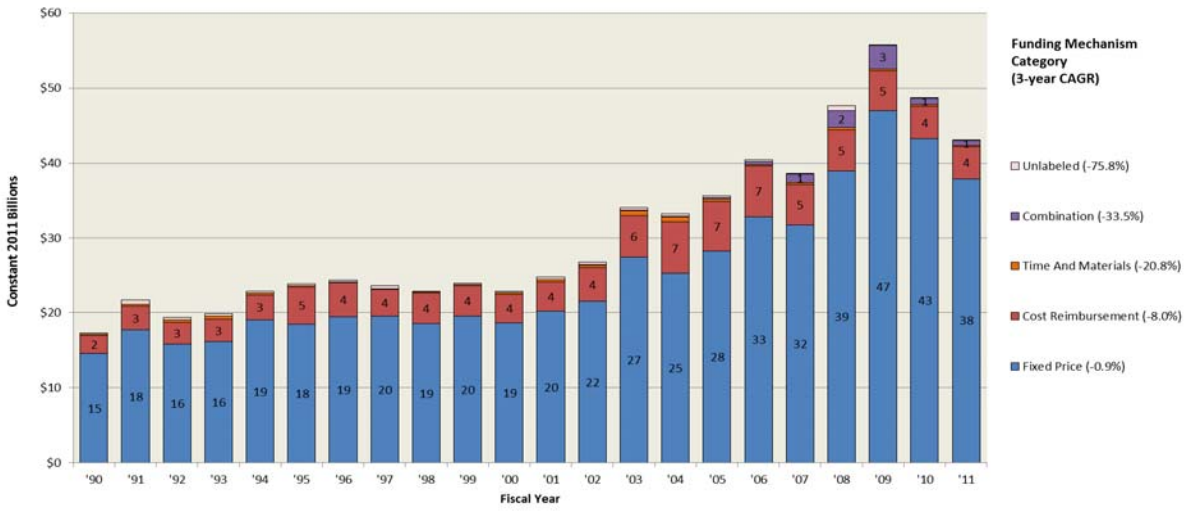

Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, a growing majority of FRS&C contract dollars were obligated under definitive contracts, rising from 49 percent in 1990 to 62 percent in 1999. Purchase orders, which accounted for a quarter of FRS&C contract obligations from 1990–1994, declined sharply thereafter, not exceeding 2 percent after 1996. Single award IDCs grew from 16 percent in 1990 to 29 percent in 1999, while multiple award IDCs grew from less than 1 percent in 1990 to 6 percent in 1999. FSS and other IDVs, which accounted for 3 percent of FRS&C contract obligations in 1990, virtually disappeared after 1995.

From 2000–2011, the DoD's use of definitive contract vehicles versus IDCs to carry out FRS&C contracts has been mixed. In the first half of the decade, the total value of definitive contracts decreased in relation to single-award and multiple-award IDCs, falling below 50 percent of total dollars obligated in 2003 from 63 percent in 2000. However, in the latter half of the decade, this trend reversed, and from 2007 through 2011, over half of all FRS&C contract dollars obligated by the DoD were carried out through definitive contract actions, compared to the 23 percent obligated through single awards and 22 percent obligated with multiple IDCs. Over the last 11 years observed, the total value of definitive contract actions increased at a 4.2 percent 11-year CAGR (from $14.3 billion in 2000 to $22.5 billion in 2011), while multiple-award IDCs increased at an 18.4 percent 11-year CAGR (growing from $1.5 billion to $9.7 billion), and single-award IDCs increased at a 3.9 percent 11-year CAGR (growing from $6.5 billion to $10 billion). The total value of purchase orders for FRS&C also increased throughout the decade, growing at a 7.2 percent 11-year CAGR, from $0.3 billion in 2000 to $0.7 billion in 2011. FSS and other IDVs, which only exceeded $400 million once from 2000–2011, nonetheless grew at a robust 13.1 percent 11-year CAGR.

Within the last four years observed, all three major vehicles have seen declining contract obligations, but single-award IDCs have declined more steeply than either type of definitive contracts or multiple-award IDCs. Between 2008 and 2011, the total value of definitive contract actions declined at a -2.7 percent 3-year CAGR, from $24.4 billion to $22.5 billion, while multiple-award IDCs' value decreased at a 1.3 percent 3-year CAGR, from $10 billion to $9.7 billion. Multiple-award contract vehicles for FRS&C, meanwhile, decreased at an 8.4 percent 3-year CAGR, from $13 billion to $10 billion. Overall, the DoD's usage of definitive contract vehicles for FRS&C is not in line with executive guidance to use more of these contract vehicles. However, as the rate of decline for these contract vehicles, in terms of total value, is slower than the decrease in usage of IDCs (except for Purchase Orders), it can be argued that offices obligating FRS&C contract dollars for DoD projects are at least attempting to implement this guidance as the overall dollars obligated for FRS&C declines rapidly.

**Figure 7-3. FRS&C by Funding Mechanism**



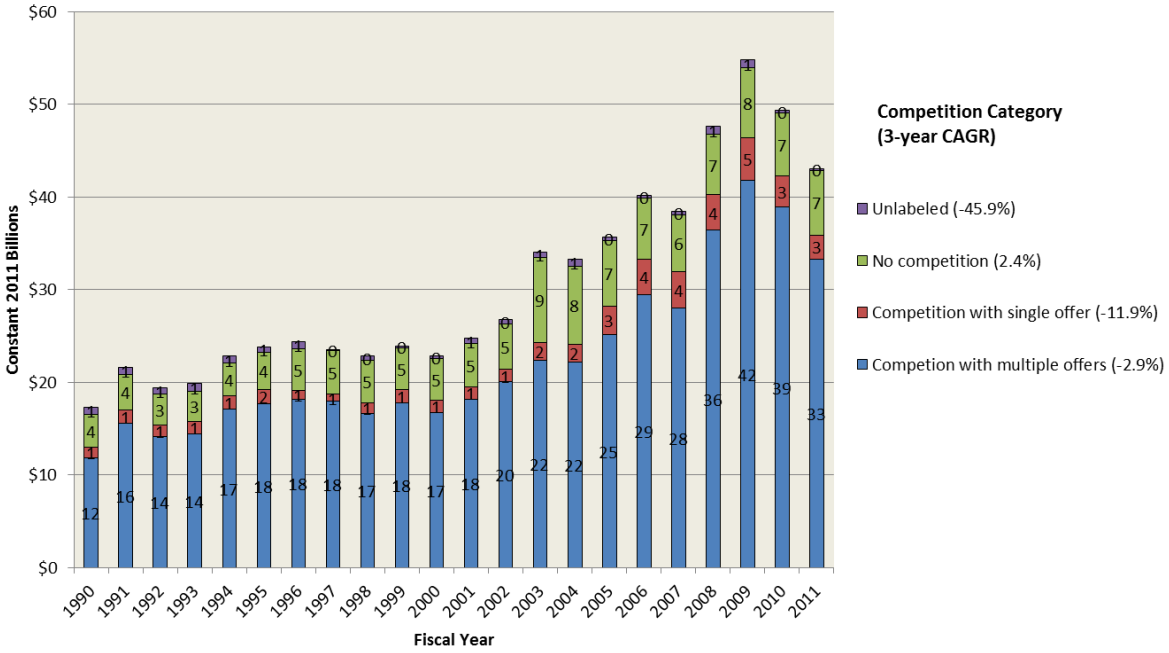

Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, over 80 percent of FRS&C contract dollars were obligated under fixed-price contract types in every year except 1995 (78 percent). Cost-reimbursement contract types accounted for between 14 percent and 18 percent of contract obligations during the decade. Neither time and materials or unlabeled ever exceeded 2 percent of FRS&C contract obligations during the 1990s.

Over the last decade observed, the overwhelming majority of FRS&C contract dollars spent by the DoD were funded through fixed-price contracts, which also experienced the highest growth of any funding mechanism. Between 2000 and 2011, the total value of fixed-price contracts (which accounted for over 75 percent of all FRS&C contract dollars in every year except 2007) grew at a 6.7 percent 11-year CAGR. Cost-reimbursement contracts grew slowly, with a 1.1 percent 11-year CAGR, and increased in total value from $3.8 billion to $4.3 billion between 2000 and 2011. Over the last four years, as overall defense contract dollars obligated for services decreased, fixed contract dollars decreased the least out of all other funding mechanisms, declining at only a -1 percent 3-year CAGR, compared to the -8 percent 3-year

CAGR for cost-reimbursement contracts, and the -21 percent 3-year CAGR for time and materials. All funding mechanisms other than fixed and cost reimbursement were scarcely utilized during the time period observed, although there was a brief surge in combination contracts between 2007 and 2009.

**Figure 7-4. FRS&C by Competition**



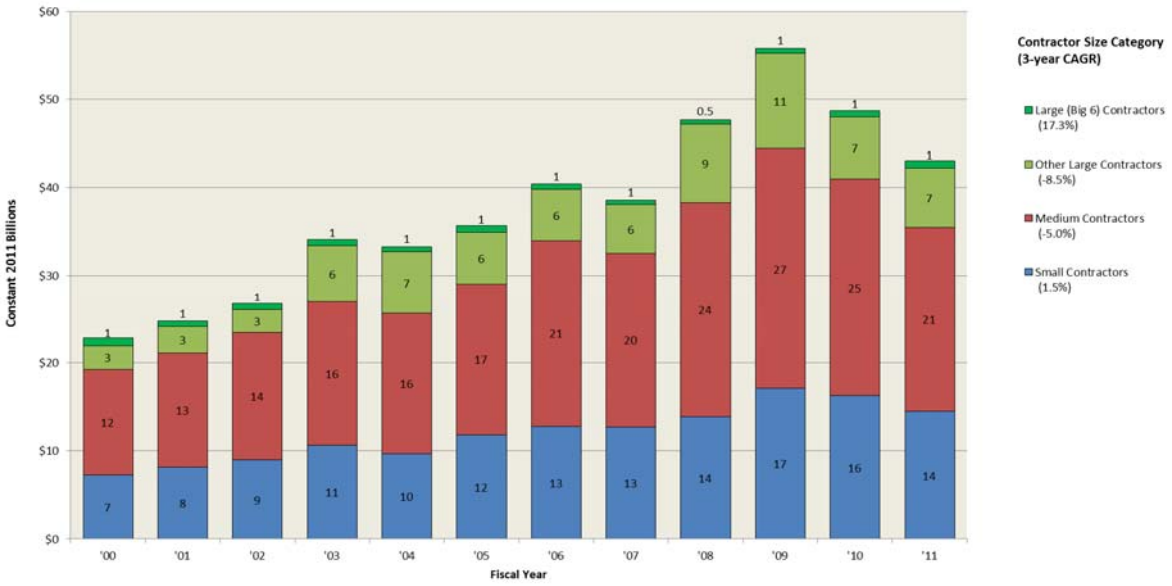

Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, approximately three-quarters of FRS&C contract dollars were obligated after competition with multiple offers. Contract dollars obligated without competition fluctuated between 15 percent and 20 percent throughout the decade. FRS&C contract dollars obligated after competition with a single offer fluctuating between 3 percent and 7 percent. And unlabeled declined from 4 percent in 1990 to 1 percent in 1999.

Overall, the level of competition within the defense FRS&C contracting industry was high during the entire period observed, with nearly 80 percent of all contract dollars having been obligated competitively in most years, and the overwhelming majority of these having been obligated after receiving multiple offers. However, in the last three years observed, as contract dollars obligated for FRS&C have decreased markedly, the number of contract dollars obligated without competition has been gradually increased, while those in all categories of competed contracts have declined. Between 2008 and 2011, contract dollars obligated for FRS&C by the DoD after receiving multiple offers decreased at a -2.9 percent 3-year CAGR (from $36.4 billion to $33.3 billion), while contracts obligated after receiving one offer in competition declined at a -11.9 percent 3-year CAGR (from $3.9 billion to $2.6 billion). Meanwhile, dollars obligated for FRS&C contracts without competition increased at a 2.4 percent 3-year CAGR, from $6.5 billion to $7 billion. This recent trend marks a shift from the trend of the last 11 years observed, when growth in contract dollars obligated after receiving multiple offers and those obligated after

receiving a single offer increased at 6.5 percent and 6.3 percent 3-year CAGRs, respectively, compared to 4 percent for uncompeted contracts. As this service category decreases in the future, due to U.S. force withdrawal from Afghanistan and the competed contract dollars likely being linked to operations in Iraq, it is expected that competed contract dollars for FRS&C will decrease faster than uncompeted contract dollars.

**Figure 7-5. FRS&C by Contractor Size**




Source: https://www.FPDS.gov; CSIS analysis.

Unlike many other industry sectors analyzed in this report, medium-sized companies claimed the majority of the FRS&C market in the last 11 years observed, averaging approximately half of all contract dollars in any given year. Since 2000, however, medium-sized firms have grown more slowly (5.2 percent 11-year CAGR) than either small companies (6.4 percent 11-year CAGR) or other large companies (8.7 percent 11-year CAGR). The Big 6 contractors, which have not exceeded 2.5% of the DoD FRS&C market since 2000, declined at a -1 percent 11-year CAGR. In the more recent term, small companies and the Big 6 contractors have grown their collective market share, while other large companies and medium companies have been decreasing in total FRS&C contract dollars obligated. Over the last four years, small-sized companies' collective value of FRS&C contract dollars grew at a 1.5 percent 3-year CAGR (from $13.8 billion to $14.5 billion), large contractors' value decreased at a -8.5 percent 3-year CAGR (from $8.9 billion to $6.8 billion), the Big 6 grew at a 17.3 percent 3-year CAGR (from $500 million to $800 million), and medium-sized FRS&C companies' total value declined at a -5 percent 3-year CAGR (from $24.5 billion to $21 billion). As a result, the relative share of small-sized companies in FRS&C increased from 29 percent of all contract dollars in 2008 to 34 percent in 2011, while that of other large and medium sized companies decreased from 19 to 16 percent and 51 to 49 percent, respectively. Meanwhile, the share going to the Big 6 contractors doubled, though only from 1 to 2 percent. Large and medium-sized companies held a greater

amount of contract dollars in overseas FRS&C, while small companies are retaining more of a core business and were not as severely affected by the withdrawal from Iraq.

### Table 7-1. FRS&C by Top 20 Contractors

| Rank | Top 20 Contractors in 2000 | Obligations in 2011 Millions | | Top 20 Contractors in 2011 | Obligations in 2011 Millions |
|---|---|---|---|---|---|
| 1 | Bechtel | $818 | | ITT | $898 |
| 2 | Federal Republic of Germany | $505 | | URS | $808 |
| 3 | The IT Group | $458 | | CBY Design Builders* | $675 |
| 4 | Lockheed Martin | $418 | | Lakeshore | $474 |
| 5 | Washington Group International | $265 | | Hensel Phelps | $473 |
| **Subtotal for Top 5** | | **$2,464** | | | **$3,328** |
| 6 | Raytheon | $246 | | Environmental Chemical Corporation | $450 |
| 7 | JA Jones Construction | $235 | | Bechtel | $449 |
| 8 | Johnson Controls | $223 | | Balfour Beatty/DPR/BIG-D Joint Venture* | $355 |
| 9 | Great Lakes International | $192 | | Gilbane | $348 |
| 10 | Hunt Companies | $179 | | The Walsh Group | $345 |
| 11 | Parsons | $173 | | Sauer | $336 |
| 12 | Chugach Alaska | $126 | | Lockheed Martin | $335 |
| 13 | Halliburton | $125 | | Johnson Controls | $317 |
| 14 | Okinawa Electric Power Company | $124 | | Great Lakes | $262 |
| 15 | Foster Wheeler | $122 | | Greenland Contractors | $246 |
| 16 | Centennial Contractors | $120 | | Foreign Utility Consolidated Reporting | $240 |
| 17 | Weeks Marine | $119 | | Harper Construction | $238 |
| 18 | Computer Sciences | $109 | | West Valley Environmental Services* | $226 |
| 19 | Foreign Utility Consolidated Reporting | $107 | | dck/TtEC LLC* | $220 |
| 20 | ITT | $106 | | BAE Systems | $219 |
| **Total for Top 20** | | **$4,769** | | | **$7,914** |
| **Total for FRS&C** | | **$22,840** | | | **$43,024** |

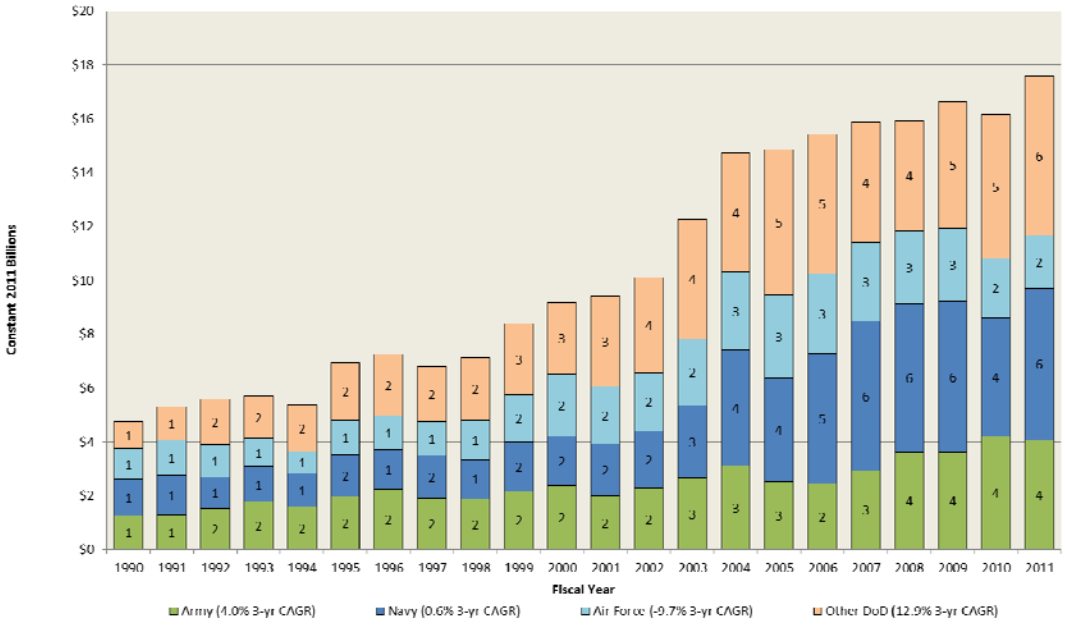
* Joint Venture
Source: https://www.FPDS.gov; Bloomberg; CSIS analysis.

Of the six service areas analyzed in this report, FRS&C had the broadest base and the least concentration at the Top 20 level, which comports with the data indicating a large proportion of FRS&C contract dollars obligated to small and medium companies. Only a handful of firms (Bechtel, Lockheed Martin, and Great Lakes International) appear in both the 2000 and 2011 Top 20. At the Top 5 level, only Bechtel remained in both years, but its total revenues from FRS&C in 2011 were only half what they were in 2000. The Top 5 claimed only 11 percent of obligated dollars in 2000 and 8 percent in 2011, while the Top 20 overall held 21 percent in 2000 and 18 percent in 2011. This demonstrates the relatively broad market distribution of contract dollars below the Top 20. Additionally, reflecting the strong presence of medium-sized contractors in the FRS&C market and the weakened presence of large contractors over time, the Top 20 in 2011 holds fewer household defense names (such as Halliburton) than in 2000.

# 8. Information and Communications Technology (ICT) Services

Section 8 examines trends in DoD Information and Communications Technology (ICT) services from 1990–2011. ICT includes all of service codes D, H, and L, and elements of service codes J, K, N, and W. During the 1990s, the share of DoD services contract dollars obligated for ICT grew from 6 percent in 1990 to 9 percent in 1999 and has fluctuated between 8 percent and 10 percent since.

**Figure 8-1. ICT by Customer**




Source: https://www.FPDS.gov; CSIS analysis.

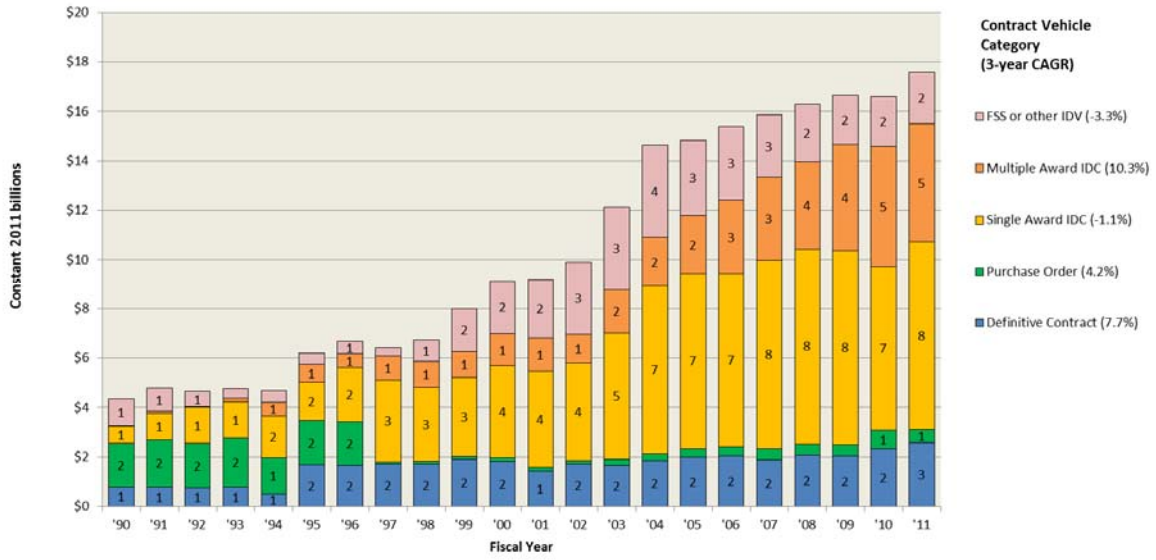
During the 1990s, contract obligations for ICT were more evenly distributed by customer than for any other service area. The Army accounted for about a quarter of ICT contract obligations. The Navy accounted for 29 percent of ICT contract obligations in 1990 but fell to 22 percent by 1999. The Air Force, which accounted for 24 percent of ICT contract obligations in 1990, declined to 15 percent by 1994 but rose back to 21 percent by 1999. Other DoD grew throughout the decade, rising from 21 percent on ICT contract obligations in 1990 to 32 percent in 1999.

Within the last decade, growth in defense ICT contracts has been highest in the Navy and in Other DoD, increasing at 10.7 percent and 7.5 percent 11-year CAGRs, respectively. As a result, Navy contract dollars obligated for ICT grew from $1.8 billion in 2000 to $5.6 billion in 2011 and Other DoD ICT contract dollars grew from $2.7 billion to $5.9 billion. During the same period, Army contract dollars obligated for ICT grew more gradually (5 percent 11-year CAGR), from $2.4 billion to $4 billion, and Air Force ICT contract dollars actually decreased at a -1.3 percent 11-year CAGR, declining in absolute terms from $2.3 billion to $2 billion. Over

the past four years observed, the above trends were more pronounced, as Air Force dollars obligated for ICT contracts decreased at a -9.7 percent 3-year CAGR (from $2.7 in 2008 to $2 billion in 2011), Army ICT contract obligations increased at a 4 percent 3-year CAGR (from $3.6 billion to $4 billion), and Other DoD contract dollars obligated for ICT increased at a 13 percent 3-year CAGR (from $4 billion to $6 billion). Meanwhile, growth in Navy contract dollars obligated for ICT stagnated after 2008 with a 0.6 percent 3-year CAGR, rising in absolute terms from $5.5 billion to $5.6 billion (after dropping to $4.4 billion in 2010).

In nearly every year over the past two decades, Other DoD obligated the largest amount of contract dollars for ICT out of all other DoD components, accounting for nearly one-third of total DoD dollars obligated for ICT contracts. In those few years when Other DoD did not obligate the most contract dollars for ICT (2007 to 2009), the Navy surged to account for one-third of all ICT contract obligations.

**Figure 8-2. ICT by Vehicle**

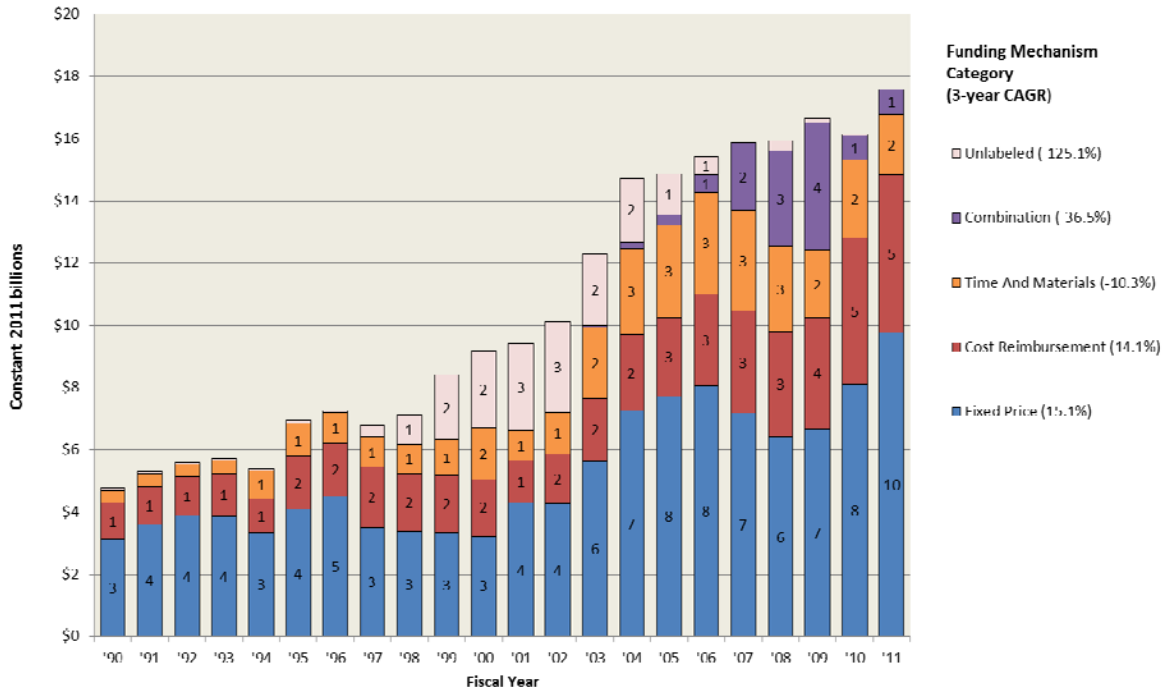



Source: https://www.FPDS.gov; CSIS analysis.

As with the other service areas, purchase orders were the most common contract vehicle for ICT in the first half of the 1990s, accounting for 32 percent to 37 percent of contract obligations. Purchase orders declined sharply in 1994, to 27 percent, and then again in 1997, to less than 2 percent. Unlike every other service area, however, purchase orders were supplanted by single award IDCs, rather than definitive contracts, as the predominant contract vehicle. Single award IDCs grew from14 percent of ICT contract obligations in 1990 to 38 percent in 1999. The share of ICT contract dollars obligated under definitive contracts increased from 17 percent in 1990 to 23 percent in 1999. Multiple award IDCs grew rapidly though the decade, rising from less than 1 percent in 1990 to 13 percent in 1999. And FSS and other IDVs, which accounted for 23 percent of ICT contract obligations in 1990, fell to 7 percent by 1995 but increased back to 20 percent by 1999.

During the period 2000–2011, a rapidly increasing proportion of contract dollars obligated by the DoD for ICT were carried out through multiple award IDCs, and there was also significant (but less recent) growth in the use of single award IDCs. The total dollar value of multiple award IDCs for ICT contracts grew at a 12.6 percent 11-year CAGR during this time, almost quadrupling from $1.3 billion to $4.8 billion between 2000 and 2011. Between the years 2008 and 2011, this rate had slowed slightly (10.3 percent 3-year CAGR). Single-award IDCs for defense ICT contracts grew in value at a 6.7 percent 11-year CAGR, doubling from $3.7 billion to $7.6 billion, but from 2008–2011 this trend reversed, and single-award IDCs declined in value by a -1.1 percent 3-year CAGR. The use of definitive contracts grew slowly from 2000–2011 (3.3 percent 11-year CAGR), but that growth has more than doubled in the 2008–2011 period (7.7 percent 3-year CAGR). Over the past four years, the total value of FSS or other IDCs used for defense ICT contracts decreased at a 3.3 percent 3-year CAGR, accelerating from a -0.3 percent 11-year CAGR. While contracting practices for defense ICT appear to be following executive guidance to increase definitive contracts, the larger increase in multiple award IDCs that continues throughout the past decade and into the last three years indicates that there is still a strong preference for IDCs.

**Figure 8-3. ICT by Funding Mechanism**



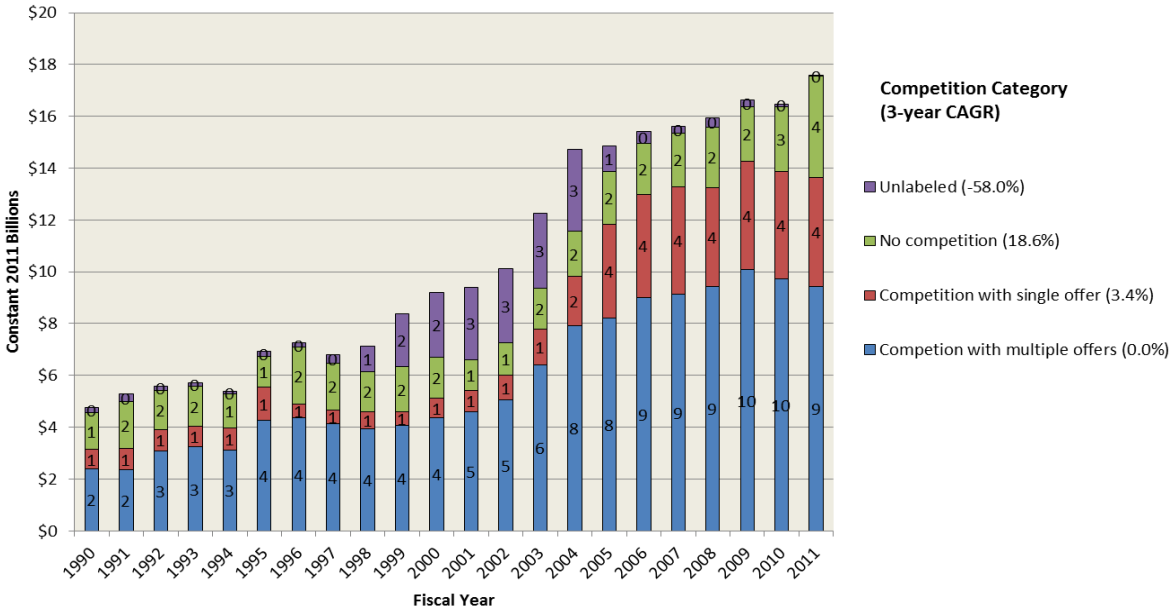

Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, a shrinking majority of ICT contract dollars were obligated under fixed-price contract types. Fixed-price accounted for 65 percent of ICT contract obligations in 1990 but only 40 percent by 1999. ICT contract dollars obligated under cost-reimbursement contract types fluctuated throughout the decade but declined overall, from 25 percent in 1990 to

22 percent in 1999. Time and materials, which accounted for 8 percent of ICT contract obligations in 1990, rose to 14 percent in 1999. Unlabeled, which had accounted for less than 2 percent of ICT contract obligations from 1990–1996, rose sharply towards the end of the decade, reaching 25 percent by 1999.

From 2000–2011, the majority of DoD contract dollars for ICT were funded through fixed-price contracts, although the decade also saw significant growth in cost-reimbursement contracts, which accelerated through the last four years of the period observed. For the entire period analyzed, almost half of all DoD contract dollars for ICT were funded by fixed-price contracts. During the course of the last decade, the total value of DoD contract dollars for ICT funded by fixed-price mechanisms increased at a 10.6 percent 11-year CAGR, on average, tripling the total value from $3.2 billion in 2000 to $9.8 billion in 2011. From 2008 to 2011, this pace increased to a 15.1 percent 3-year CAGR. For the majority of the period 2000 to 2011, nearly half of all DoD contract dollars for ICT contracts were funded through fixed-price contract mechanisms. Cost-reimbursement funding mechanisms grew rapidly over the past four years (14.1 percent 3-year CAGR) compared to the 2000–2011 period (9.8 percent 11-year CAGR). The result was an increase in the total value of cost-reimbursement funding mechanisms for ICT contracts, from $1.8 billion in 2000 to $3.4 billion in 2008, followed by an increase to $5 billion by 2011. Time and materials funding mechanisms for ICT experienced slow growth over the period 2000 to 2011 with a 1.7 percent 11-year CAGR, increasing from $1.7 billion to $2 billion, but then decreased in total value over the period 2008 to 2011 from $2.7 billion to $2 billion (-10.3 percent 3-year CAGR). Combination contracts briefly surged after 2006, reaching a peak of $3.1 billion in 2008 from $0.5 billion just two years before but have since 2010 remained slightly below the $1 billion mark. Unlabeled contract dollars have recently all but disappeared from all DoD accounts of ICT contracting, but they accounted for between $1 billion and $3 billion between 1998 and 2005.

**Figure 8-4. ICT by Competition**

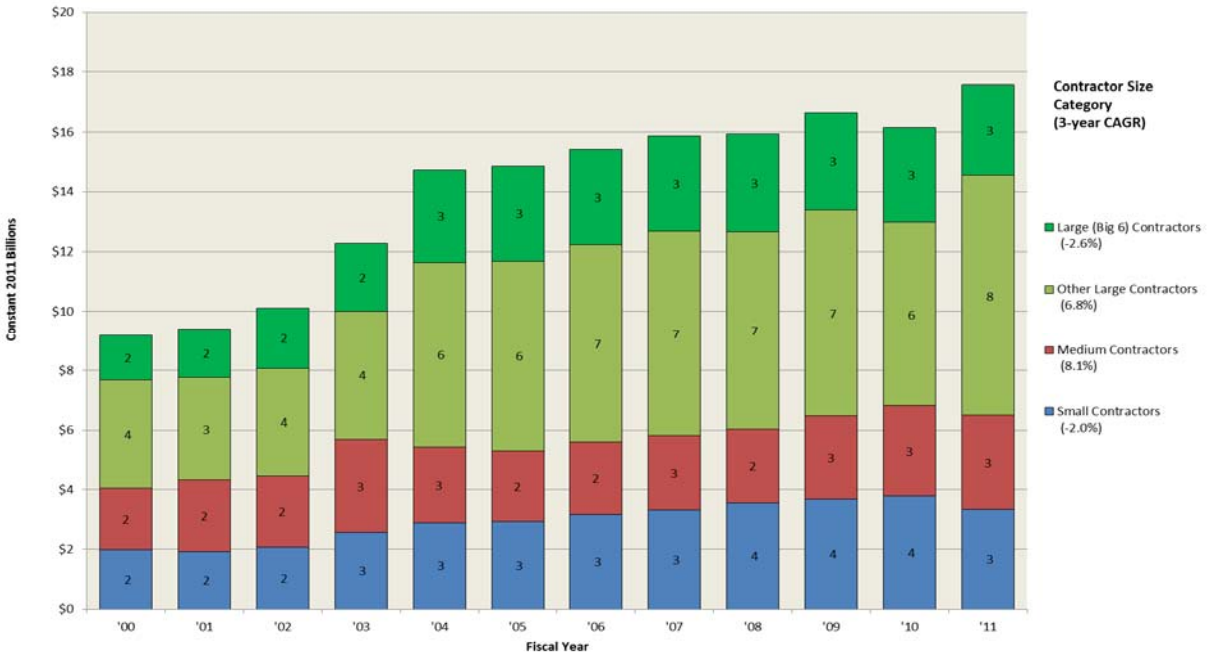



Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, ICT contract dollars obligated after competition with multiple offers grew from 50 percent in 1990 to 61 percent in 1997 but then dropped sharply, to 49 percent in 1999. ICT contract dollars obligated without competition fluctuated throughout the decade but decreased overall, from 30 percent in 1990 to 21 percent in 1999. ICT contract dollars obligated after competition with a single offer declined from 16 percent in 1990 to 6 percent in 1999. And unlabeled, which accounted for less than 6 percent from 1990–1997, rose sharply at the end of the decade, to 25 percent in 1999.

Between the years 2000 and 2011, the majority of defense ICT contract dollars were obligated competitively (running between 55 percent and 77 percent in any given year), although the number of dollars obligated without competition grew towards the latter half of the period. Of those contract dollars obligated through competition, those obligated after receiving multiple offers were most numerous, accounting for between 50 and 60 percent of total dollars for defense ICT contracts and between 70 and 80 percent of all competitively obligated ICT contract dollars in every year between 2000 and 2011. Throughout the period, the total contract value obligated after competition with multiple offers for defense ICT contracts grew at a 7.2 percent 11-year CAGR, from $4.4 billion in 2000 to $9.4 billion in 2011, although this growth stalled at a 0.0 percent 3-year CAGR from 2008–2011. The total value of competitively obligated ICT contract dollars receiving only one bid grew much faster than those receiving multiple offers, at a 17.2 percent 11-year CAGR, increasing in absolute value from $0.7 billion to $4.2 billion. However, between the years 2008 and 2011, this growth slowed to a 3.4 percent 3-year CAGR. While the increase in competitively obligated contract dollars slowed in the latter part of the period 2000 to 2011, those obligated without competition increased sharply. In the years between 2008 and 2011, uncompeted contract dollars for defense ICT increased rapidly (18.6 percent 3-year CAGR), surging ahead of its more modest 8.5 percent 11-year CAGR for the entire period. As a result, contract dollars obligated for ICT without first going through competition grew from $1.6 billion in 2000 to $2.3 billion in 2008 and then nearly doubled to almost $4 billion in 2011.

**Figure 8-5. ICT by Contractor Size**




Source: https://www.FPDS.gov; CSIS analysis.

As seen in other DoD contracting industries, the share of the ICT market held by medium-sized contractors suffered a sharp decrease and a prolonged squeeze from both large and small-sized contractors in the mid-years of the decade but then resumed growth in the last four years observed. In 2003, medium-sized contractors held 26 percent of the total yearly contract dollars obligated by the DoD for ICT, compared to 21 percent for small contractors, 35 percent for other large contractors, and 19 percent for the Big 6. However, between 2003 and 2004, the market value of medium-sized contractors in ICT sharply decreased from $3.1 to $2.5 billion, cutting their total relative share to 17 percent. The difference in the market was made up by other large contractors, which surged ahead in combined value from $4.3 billion in 2003 to $6.2 billion in 2004, growing from 35 percent of the market to 42 percent. For the next several years, large contractors' total value and market share remained near these levels, while small contractors grew steadily in both regards and medium-sized contractors' market share stayed flat, hovering between $2.4 billion and $2.8 billion. For the entire decade observed, medium-sized contractors grew at a 4 percent 11-year CAGR, compared to the 4.8 percent 11-year CAGR for small contractors, 7.6 percent 11-year CAGR for other large contractors, and 6.4 percent 11-year CAGR for the Big 6 contractors. However, between 2008 and 2011, total value of DoD ICT contracts claimed by medium-sized contractors grew at an 8.1 percent 3-year CAGR, while small contractors' ICT contracts declined at a -2 percent 3-year CAGR. Other large companies grew at a 6.8 percent 3-year CAGR, while total contract value going to the Big 6 contractors shrunk at a -2.6 percent 3-year CAGR. As a result, medium contractors increased their share of DoD ICT contracts from 16 percent in 2008 to 18 percent in 2011, while small contractors fell from 22 percent to 19 percent, other large contractors increased from 42 percent to 46 percent, and the Big 6 declined from 21 percent to 17 percent. Although the squeeze on medium-sized contractors

in the ICT industry has started to abate, there appears to be greater pressure exerted on small contractors by both them and large contractors.

### Table 8-1. ICT by Top 20 Contractors

| Rank | Top 20 Contractors in 2000 | Obligations in 2011 Millions | | Top 20 Contractors in 2011 | Obligations in 2011 Millions |
|---|---|---|---|---|---|
| 1 | Lockheed Martin | $645 | | Hewlett-Packard | $1,707 |
| 2 | Computer Sciences | $500 | | SAIC | $1,295 |
| 3 | SAIC | $425 | | Lockheed Martin | $1,062 |
| 4 | Hughes Arabia | $395 | | Northrop Grumman | $797 |
| 5 | Northrop Grumman | $368 | | Computer Sciences Corp. | $689 |
| **Subtotal for Top 5** | | **$2,333** | | | **$5,550** |
| 6 | AT&T | $344 | | General Dynamics | $677 |
| 7 | Electronic Data Systems | $304 | | Verizon | $601 |
| 8 | GTE | $237 | | ITT | $502 |
| 9 | General Dynamics | $221 | | Accenture | $402 |
| 10 | Raytheon | $212 | | CACI | $401 |
| 11 | Sprint | $159 | | ARTEL | $379 |
| 12 | MCI/Worldcom | $151 | | L3 Communications | $341 |
| 13 | CACI | $129 | | AT&T | $313 |
| 14 | Booz Allen Hamilton | $129 | | BAE Systems | $243 |
| 15 | Litton | $120 | | Apptis, Inc | $219 |
| 16 | Unisys | $118 | | IBM | $206 |
| 17 | Mantech Intl A | $110 | | Booz Allen Hamilton | $205 |
| 18 | TRW | $88 | | Serco | $204 |
| 19 | Intergraph | $82 | | Scientific Research Corporation | $200 |
| 20 | ITT | $80 | | CGI | $197 |
| **Total for Top 20** | | **$4,816** | | | **$10,641** |
| **Total for ICT** | | **$9,188** | | | **$17,572** |

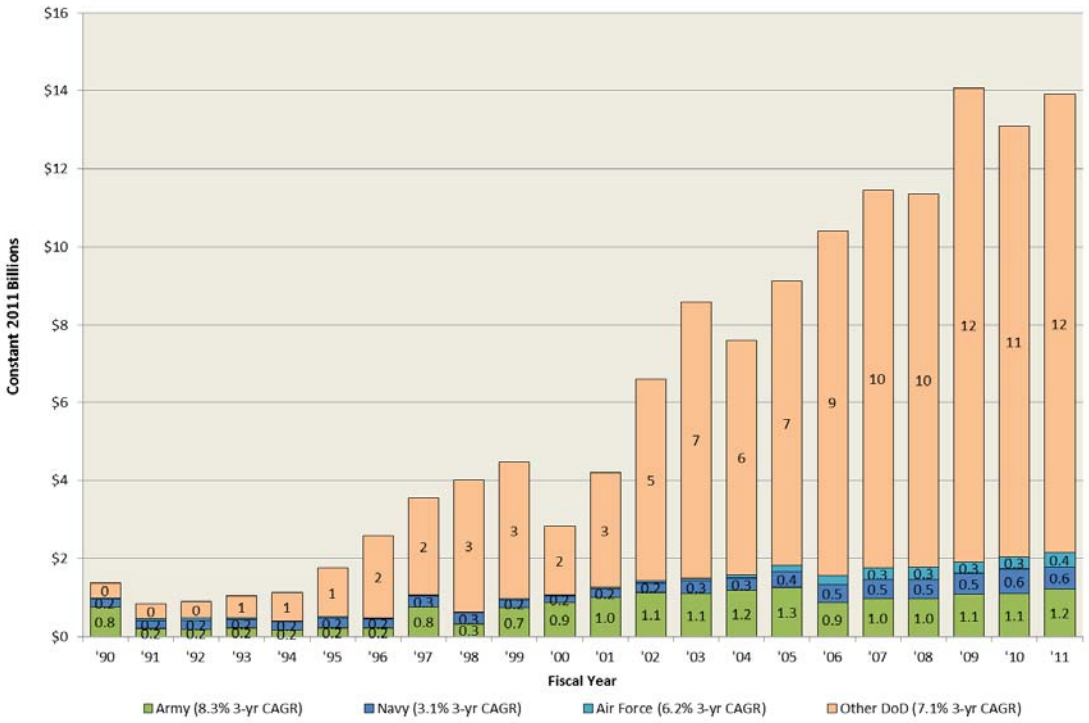
Source: https://www.FPDS.gov; Bloomberg; CSIS analysis.

Three companies remained in the Top 5 in 2000 and 2011: Lockheed Martin, Computer Science Corp., and Northrop Grumman. Between these years, AT&T dropped into the lower range of the Top 20, decreasing in total revenues from defense-related ICT services as well, and Hughes Arabia disappeared from the Top 20. Within the Top 20 overall for ICT, the handful of telecommunications companies present in 2000 (Sprint, MCI/Worldcom, Verizon, and AT&T), were cut to AT&T and Verizon between 2000 and 2011. Furthermore, large computer hardware and systems-providing companies such as IBM, BAE Systems, and L3 Communications appeared in the Top 20 in 2011, after not having met the Top 20 requirements in 2000. In relative dollar terms, the Top 5 in the ICT industry grew from 25 percent of the market to 32 percent of the market, while the Top 20 overall increased from 52 percent to 62 percent. This indicates significant consolidation in the ICT market at the Top 20 level between 2000 and 2011, with contract dollars split almost evenly between the Top 5 and the remaining Top 20.

# 9. Medical (MED) Services

Section 9 examines trends in DoD Medical (MED) services from 1990–2011. Medical includes all of service codes G and Q. MED grew from 2 percent of overall DoD services contract obligations in 1990 to 5 percent in 1999 and has gradually risen to 7 percent by 2011, the lowest share of any of the service areas. MED has, however, seen the strongest growth rate in the 2000–2011 period of any service area (15.6 percent 11-year CAGR).

**Figure 9-1. MED by Customer**



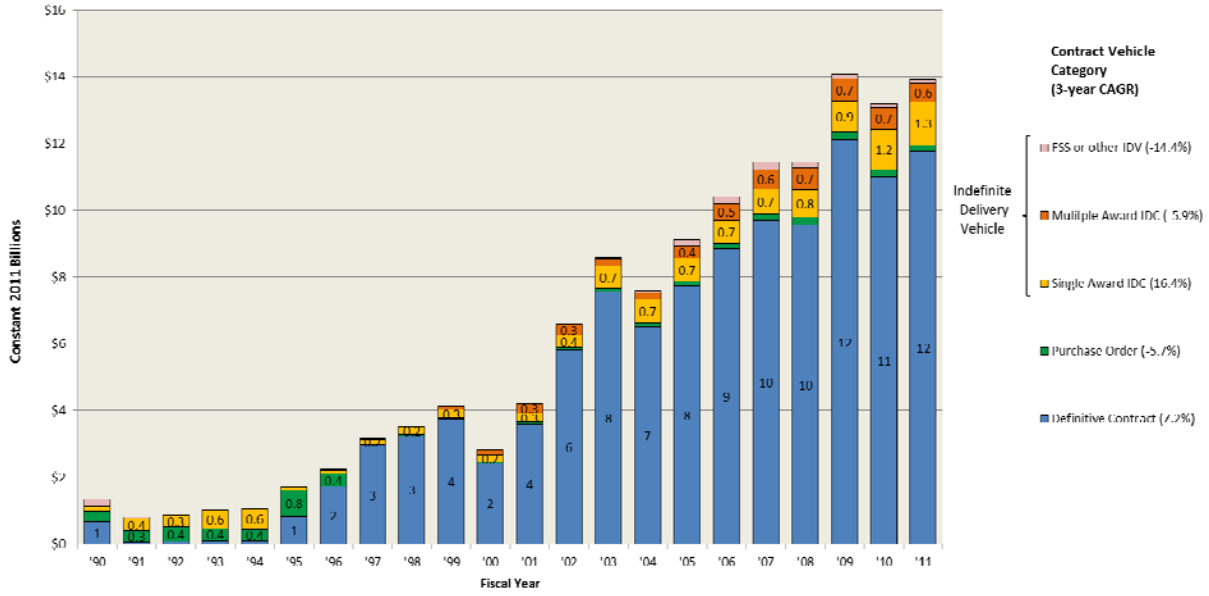

Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, Other DoD accounted for growing majorities of MED contract obligations, rising from 45 percent in 1991 to 78 percent in 1999. The Army, which accounted for 55 percent of MED contract obligations in 1990, dropped to 25 percent in 1991 and declined for most of the rest of the decade, rebounding somewhat to 17 percent in 1999. The Navy accounted for 25 percent of MED contract obligations in 1992 but declined to 4 percent in 1999. And the Air Force, which accounted for 7 percent of MED contract obligations in 1991, dropped to less than 1 percent starting in 1996.

Increases in contract dollars obligated for MED by the DoD correlates with the pressures exerted on the military by overseas contingencies in Iraq and Afghanistan from 2002/2003 to 2011. Over the years 2000 to 2011, dollars obligated to MED by Other DoD, which includes the agency responsible for TRICARE, increased at a 19 percent 11-year CAGR, from $1.7 billion to $11.8 billion. Between 2008 and 2011, this rate of growth slowed to a 7.1 percent 11-year

CAGR, although this time period includes a sudden spike in Other DoD's account that increased its total dollars obligated for MED from $9.6 billion to $12.2 billion between 2008 and 2009. All other military components have seen their MED accounts increase over the past decade as well, but the speed of their growth is attributable to the fact that their obligations for MED in the first part of the decade were low to begin with. Contract dollars obligated for MED by Other DoD are not likely to decline even after U.S. forces withdraw from Afghanistan, given current legislation extending to TRICARE benefits for veterans and their families, and will likely increase as long as overseas contingency operations proceed. While there have been previous declines in this category during the years of operations in Iraq and Afghanistan, they have been short-lived and have amounted to only as much as $1 billion in year-on-year value.

**Figure 9-2. MED by Vehicle**

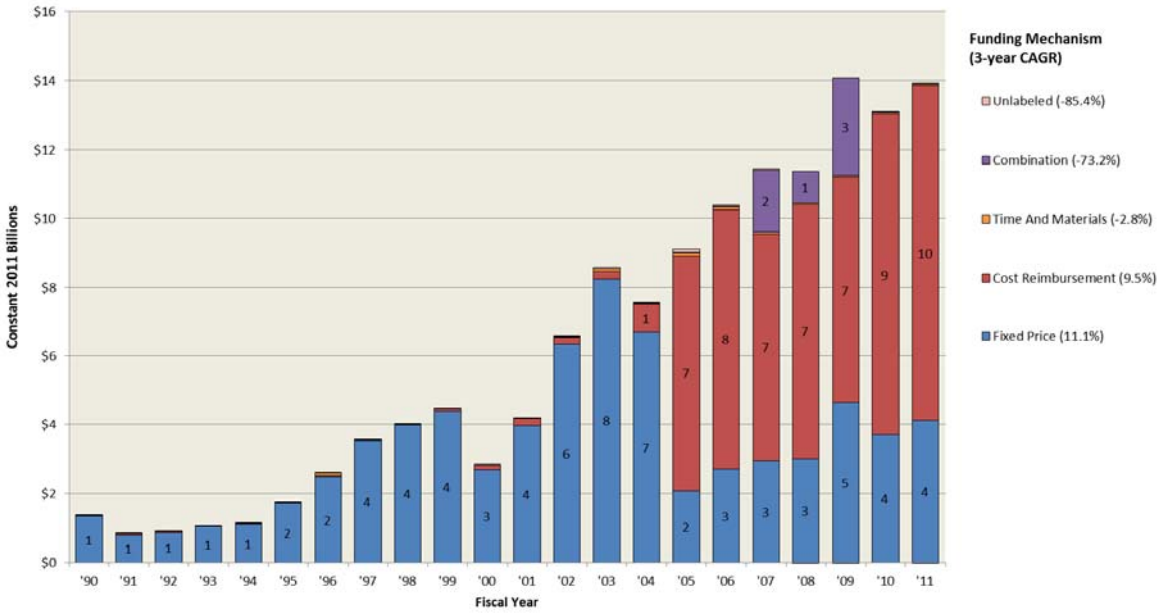



Source: https://www.FPDS.gov; CSIS analysis.

MED contract obligations in the first half of the 1990 saw the most chaotic shifts in contract vehicle use of any service area, due largely to the small dollar totals involved. Definitive contract accounted for 50 percent of MED contract obligations in 1990, dropped to 7 percent in 1991, rebounded to 47 percent in 1995, and grew to account for over 80 percent from 1997–1999. Purchase orders rose from 23 percent of MED contract obligations in 1990 to 50 percent in 1992, dropped to 31 percent by 1994, rebounded to 45 percent in 1995, and declined to under 1 percent from 1997–1999. Single award IDC rose from 9 percent in 1990 to 45 percent in 1991 to over 50 percent in 1993 and 1994, before dropping below 6 percent for the rest of the decade. Multiple award IDCs never accounted for more than 1 percent of MED contract obligations until 1999, when they were 2 percent of contract obligations. And FSS and other IDVs, which accounted for 17 percent of MED contract obligations in 1990, declined to 4 percent in 1991, and never exceeded 1 percent after 1992.

The vast majority of MED contract dollars spent by the DoD between 2000 and 2011 were obligated via definitive contract vehicles, while the amount obligated through IDCs increased steadily. In each year since 2000, definitive contracts accounted for over 80 percent of all contract dollars spent on MED. The number of contract dollars obligated under definitive contracts grew at a 15.4 percent 11-year CAGR and increased almost five-fold from $2.4 billion to $11.8 billion during the period. Growth in this contract vehicle category slowed to a 7.2 percent 3-year CAGR from 2008–2011. The number of contract dollars obligated by the DoD for MED through single-award IDCs increased rapidly during the period 2000 to 2011 (18.9 percent 11-year CAGR), with much of this growth occurring between 2008 and 2011 (3-year CAGR of 16.4 percent). However, in absolute terms, this amounted to an increase from $0.2 billion to $1.3 billion, and this category of contract vehicle accounted for less than 10 percent of total MED contract dollars in any given year. Similarly, contract dollars for defense MED obligated through multiple-award IDCs increased at a 12.1 percent 11-year CAGR, but between 2008 and 2011, this growth reversed and the total amount in this vehicle category declined at a -5.9 percent 3-year CAGR. Overall, the dollar amounts obligated through multiple-award IDCs increased from $0.2 billion to $0.7 billion between 2000 and 2008 and then decreased to $0.6 billion in 2011. Neither purchase orders nor FSS or other IDVs accounted for more than $250 million, or 2 percent of all DoD contract dollars obligated for MED, in any year during the period observed.

**Figure 9-3. MED by Funding Mechanism**

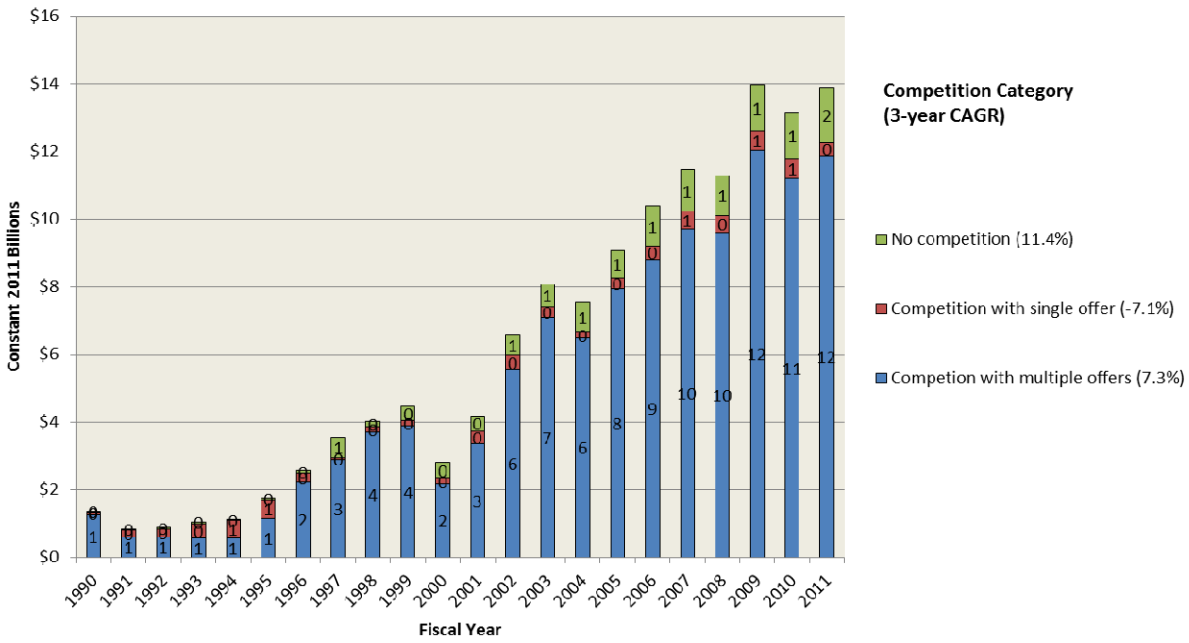



Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, over 95 percent of MED contract dollars were obligated under fixed-price contract types. Cost-reimbursement contract types never accounted for more than 5 percent of contract obligations, and time and materials only exceeded 1 percent in 1996 (3 percent). Neither combination contracts nor unlabeled were significant factors during the 1990s.

Beginning in 2004/2005, there was a profound shift from using fixed-price mechanisms for MED contract dollars to using cost-reimbursement schemes. From 2000 to 2011, cost-reimbursement contract dollars grew at a 48.4 percent 11-year CAGR, increasing in absolute terms from barely $0.1 billion in 2000 to almost $10 billion by 2011. In the first year that this trend arose, between 2004 and 2005, contract dollars obligated for MED increased from just under $1 billion to almost $7 billion. From 2004 onward to the end of the period observed, MED contract dollars funded by cost-reimbursement mechanisms grew by an average of 41.5 percent annually. Even in the last four years observed, cost-reimbursement mechanisms for MED grew strongly (9.5 percent 3-year CAGR), rising from $7.4 billion in 2008 to $9.7 billion in 2011. Fixed-price contract dollars for MED rapidly decreased after 2004, dropping from 90 percent of all MED contract dollars in 2004 to just over 22 percent in the following year. In absolute terms, this decline continued at an average annual rate of -6.6 percent throughout the remainder of the years observed, resulting in an absolute decrease from $6.7 billion in 2004 to just over $4 billion in 2011. Since 2008, however, use of fixed-price contracts has rebounded somewhat, as contract value obligated under fixed-price terms has grown at an 11.1 percent 3-year CAGR.

**Figure 9-4. MED by Competition**

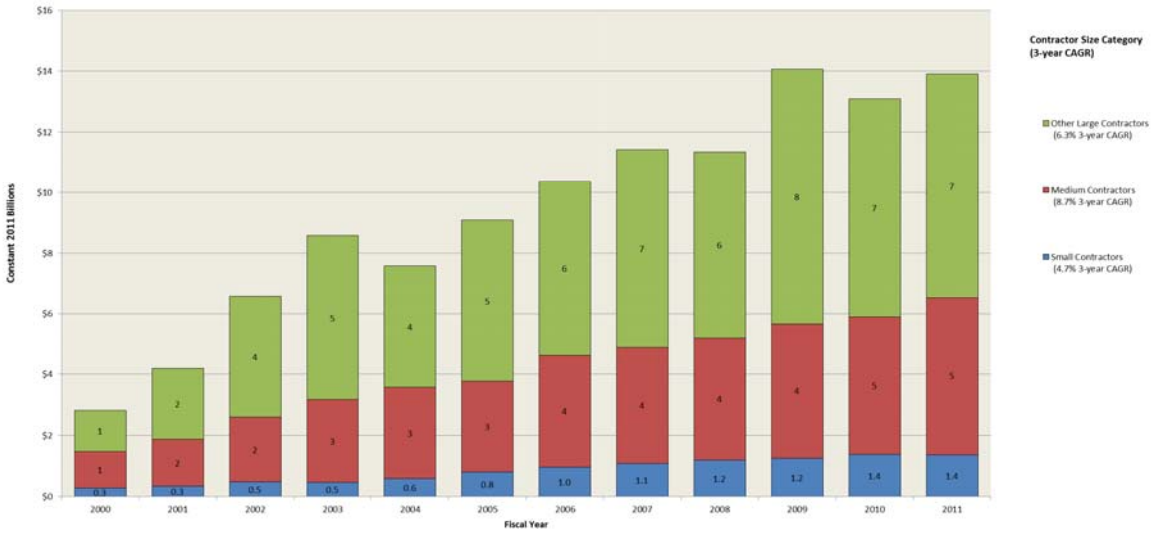



Source: https://www.FPDS.gov; CSIS analysis.

During the 1990s, strong majorities of MED contract dollars were obligated after competition with multiple offers. Competition with multiple offers accounted for 91 percent of contract obligations in 1990, declined to 50 percent in 1994, and then rebounded to 87 percent in 1999. MED contract dollars obligated without competition accounted for less than 2 percent in 1990 and only exceeded 6 percent in two years during the decade (17 percent in 1997, 9 percent in 1999). Contract dollars obligated after competition with a single offer rose from 6 percent in 1990 to 47 percent in 1994 but declined to 3 percent in 1999. And unlabeled contracts never accounted for more than 1 percent of MED contract obligations.

The defense-related MED industry was highly competitive throughout the period 2000 to 2011, with more than 80 percent of all contract dollars obligated through competition after having received multiple offers in every year since 2001. Growth in competition with multiple offers occurred at a 16.6 percent 11-year CAGR, increasing more than five-fold from $2.2 billion in 2000 to $11.9 billion in 2011. Meanwhile, contract dollars obligated for defense-related MED services after receiving one offer in competition grew at a 9 percent 11-year CAGR, doubling in value from $0.2 billion in 2000 to $0.4 billion in 2011. However, in the last four years observed, competed contract dollars receiving one offer declined at a -7.1 percent 3-year CAGR, from $0.5 billion in 2008, while growth competitions with multiple offers merely slowed (7.3 percent 3-year CAGR). Uncompeted contract dollars obligated for defense-related MED services increased at an 11.8 percent 11-year CAGR, tripling in total value from just over $0.5 billion in 2000 to $1.6 billion in 2011 and continued to grow strongly from 2008–2011 (11.4 percent 3-year CAGR). Despite strong growth over the past decade, dollars obligated for MED without first undergoing competition have not accounted for more than 12 percent of total MED contract obligations since 2000.

**Figure 9-5. MED by Contractor Size**




Source: https://www.FPDS.gov; CSIS analysis.
Note: The Big 6 contractors, which did not exceed $40 million dollars in MED contract obligations in any year from 2000–2011, are not shown on this chart

The squeeze on medium-sized contractors seen in other segments of the contracted defense services industry between the years 2000 and 2011 was not as strong in MED services, although its effects are still seen in the changes in relative market shares and average growth rates for this category. Between 2000 and 2011, the total value of all medium-sized MED contractors grew at a robust 14.3 percent 11-year CAGR. Even so, this was slower than the growth rates for small contractors (15.3 percent 11-year CAGR) and other large contractors (16.7 percent 11-year CAGR). In relative terms, medium-sized contractors' total share of the defense-related MED market decreased from 42 percent to 37 percent, with the difference entirely taken up by large contractors, which grew in relative market share from 48 percent to 53 percent.

Meanwhile, small contractors' collective market share remained at 10 percent between 2000 and 2011, despite fluctuations (largely downward) within the intervening years. It would appear, therefore, that large contractors for defense-related MED services consumed part of the medium-sized contractors' market share, while small-sized contractors did not exert significant pressure on the medium-sized contractors. In the last four years observed, medium-sized contractors providing MED services to DoD components increased at a 8.7 percent 3-year CAGR, nearly double the 4.7 percent 3-year CAGR of small-sized contractors and higher than the 6.3 percent 3-year CAGR of large contractors between the years 2008 and 2011.

**Table 9-1. MED by Top 20 Contractors**

| Rank | Top 20 Contractors in 2000 | Obligations in 2011 Millions | | Top 20 Contractors in 2011 | Obligations in 2011 Millions |
|---|---|---|---|---|---|
| 1 | Foundation Health Federal Services | $643 | | Humana | $3,432 |
| 2 | Triwest Healthcare Alliance | $429 | | TriWest Healthcare | $3,091 |
| 3 | Anthem Insurance Companies | $276 | | Health Net | $2,959 |
| 4 | Sierra Military Health Service | $171 | | Highmark | $586 |
| 5 | Humana | $165 | | Express Scripts | $425 |
| **Subtotal for Top 5** | | **$1,685** | | | **$10,493** |
| 6 | Christus Health | $135 | | Johns Hopkins APL | $297 |
| 7 | Martin's Point Health Care | $122 | | Martin's Point Health Care | $271 |
| 8 | Johns Hopkins University | $89 | | LHI | $214 |
| 9 | Pacific Medical Centers | $81 | | Christus Health | $175 |
| 10 | Electronic Data Systems | $28 | | Brighton Marine Health Center | $144 |
| 11 | SAIC | $25 | | PacMed | $143 |
| 12 | Litton | $19 | | St. Vincent's | $113 |
| 13 | Computer Sciences | $5 | | CasePro | $98 |
| 14 | SRA International | $3 | | WPS Health Insurance | $96 |
| 15 | AMS | $3 | | Luke | $84 |
| 16 | Northrop Grumman | $1 | | CR Associates | $60 |
| 17 | Chugach Alaska | $1 | | OMV Medical | $51 |
| 18 | BAE Systems | $1 | | American Hospital Services Group LLC | $51 |
| 19 | American Management Systems | $1 | | Quest Diagnostics | $43 |
| 20 | Harris | $0 | | AECOM Technology | $36 |
| **Total for Top 20** | | **$2,199** | | | **$12,370** |
| **Total for MED** | | **$2,820** | | | **$13,916** |

Source: https://www.FPDS.gov; Bloomberg; CSIS analysis.

Between 2000 and 2011, the bulk of contract dollars in the defense-related MED services sector shifted towards the Top 20 and was dominated by large health insurance providers in both years. Insurance companies Humana and TriWest Healthcare ranked in the Top 5 MED contractors in both years, accounting for over half of all MED contract dollars in 2011, compared to one-third of the total amount spent in 2000. Between 2000 and 2011, there was also a shift towards hospitals and medical groups below the Top 5, although far fewer contract dollars were obligated to them. Indeed, the gap between the large insurance companies and the hospital providers was large in both 2000 and 2011, with companies such as Human and TriWest receiving over $3 billion each in 2011, compared to most of the health centers receiving around $0.1 billion each. As a total percentage of the MED industry, the Top 5 accounted for 60 percent of all contract dollars obligated in 2000, increasing to 75 percent in 2011. Meanwhile, the Top 20 overall increased from 78 percent to 89 percent between 2000 and 2011.

# 10. Summary

From 1990–2011, total annual obligations on services contracts by the DoD almost tripled, rising from $74 billion in 1990 to $199 billion in 2001 and peaking at $217 billion in 2009. This increase has not been constant, however. During the 1990s, despite decreases in overall defense spending as a result of the post-Cold War defense drawdown, reductions in the DoD workforce and Federal policies aimed at outsourcing numerous activities to the private sector (largely driven by the White House's "Reinventing Government" initiative) drove obligations on defense service contracts steadily upwards, reaching $95 billion in 1999 (a 28 percent increase compared to 1990). In the years 2000–2011, driven by operations in Iraq and Afghanistan, dollars obligated for defense services increased at a more rapid pace, increasing by 116 percent overall. However, having peaked in 2009, the drawdown of forces from the Iraq and Afghanistan theaters and the drawdown in defense spending overall caused obligations for DoD service contracts to decrease by some $18 billion from 2009 to 2011 (a decrease of 8 percent).

As a share of total DoD outlays, service contracts were almost constantly on an upward year-over-year trend until 2009, rising from 20 percent in 1990 to 27 percent in 1999 and a high of 33 percent in 2009. During the drawdown that has taken place since then, the share of service contract dollars as a share of total DoD outlays decreased to 29 percent in 2011.

When analyzed by DoD component (Army, Air Force, Navy and "Other DoD"), the fastest growth occurred in "Other DoD," where service contract obligations increased six-fold between 1990 and 2011, from $6 billion to a record high of $36 billion driven largely by TMA. Army obligations for service contracts more than quadrupled during the same period, rising from $18 billion to $76 billion. Service contract dollars in the Air Force and Navy both grew by smaller amounts, approximately 74 percent in each between 1990 and 2011. However, during the last three years (2009–2011), the Army's obligations for service contracts decreased by 14.5 percent per year while the Air Force and Navy's decreased by 10 and 8 percent, respectively, and "Other DoD" increased by 9 percent.

Examined by type of services contracted for, the fastest growing area was that of medical services (MED), which increased from $1 billion in 1990 to $14 billion in 2011. The second highest growth was in the professional administrative and management services (PAMS), which more than quadrupled in value from $15 billion in 1990 to $61 billion in 2011. Information and communications services (ICT) more than tripled, from $5 billion in 1990 to $18 billion in 2011. Services related to equipment (ERS) and facilities (FRS&C) grew from $13 billion to $25 billion and from $17 billion to $43 billion, respectively. The lowest increase in the years 1990–2011 was in research and development (R&D), where contract obligations increased from $23 billion to $38 billion. Of the six service areas analyzed in this report, FRS&C and R&D bore the brunt of the current drawdown in defense spending. Of the $18 billion decrease in total service contract obligations, $13 billion were in FRS&C, and $6 billion were in R&D. PAMS decreased by $2 billion, MED held steady at $14 billion, and ERS and ICT increased, by $3 billion and $1 billion, respectively.

Trends in contract vehicles were characterized by significant growth in IDVs and Definitive Contracts, each of which account for some 45 percent of service contract dollars

obligated. A decline in Purchase Order contracts in the mid-1990s was not reversed, and this category has since accounted for a small fraction of total contract vehicles. In the past decade, a preference for IDCs over definitive contracts was observed in PAMS and ERS, while in FRS&C, MED, and R&D, total contract dollars obligated through definitive contracts outweighed those obligated through IDCs. In the past three years, however, while the dollars obligated through most contract vehicle categories have decreased, those obligated via multiple IDCs have increased (from $42 billion in 2009 to $47 billion in 2011).

Regarding funding mechanisms used in defense service contracting, the categories of fixed price and cost reimbursement have accounted for the majority of dollars obligated by the DoD between 1990 and 2011. The time and materials and combination funding mechanisms were widely used in the mid-2000s but have since been significantly reduced. The fastest growing category was fixed price, and by 2011, over 50 percent of all service contract dollars were obligated using this funding mechanism (compared to 43 percent using cost reimbursement and 4.5 percent using time and materials). In each of the six service areas, there has been either strong growth in fixed-price contracts or steady usage of this funding mechanism without increases in cost-reimbursement contract dollars. The service areas that made the most use (by value) of cost-reimbursement mechanisms were R&D (76 percent of obligations in 2011) and MED (71 percent). On the other end of the scale, the overwhelming majority (88 percent) of DoD contract dollars obligated to FRS&C in 2011 were funded through fixed-price mechanisms.

Competition, particularly competition with multiple offers, grew significantly between 1990—when 58 percent of contracts were competed–and 2011–when 76 percent were competed. In particular, real competition (i.e., competition with multiple offers) increased from 51 percent in 1990 to 63 percent in 2011. Meanwhile, contracts that were not competed accounted for 31 percent of dollars obligated for services in 1990 and 23 percent in 2011. These trends of increasing levels of competition and fewer non-competed contracts were reflected in all the service areas except R&D, where the share of dollars obligated after competition with multiple offers decreased, while the share obligated without competition increased. R&D was also the service area with the lowest share of dollars obligated via competitions that received multiple offers; only 44 percent of contract dollars were obligated in this manner. Interestingly, the ICT area was not far behind, with 47 percent of all dollars obligated after competitions with multiple offers. The highest level of real competition was in the MED area, where 86 percent of contracts in 2011 were awarded in this manner. In PAMS, ERS, and FRS&C, the levels of real competition were 62 percent, 65 percent, and77 percent, respectively. However, as contract dollars declined from 2009 onward, so too did the dollars obligated without being competed. Specifically, in ICT and R&D, the percentage of contract dollars awarded competitively declined while the percentage of uncompeted contract dollars awarded increased. (In the case of ICT, this trend applied to the absolute dollar amounts as well.)

Regarding the industrial base providing the DoD with services, large contractors (those with an annual revenue greater than $3 billion, not including the Big 6) significantly increased their market share from 22 percent in 2000 to 30 percent in 2011. The biggest increases were in MED, ERS, PAMS, and ICT, and by 2011, large companies accounted for the most dollars obligated in these service areas. The share of the DoD services market claimed by the Big 6 companies (Lockheed Martin, Boeing, Northrop Grumman, General Dynamics, Raytheon, and

BAE Systems) fell from 22 percent in 2000 to 20.5 in 2011. The Big 6 were obligated the majority of R&D service dollars in every year over the last decade but held relatively small shares of the other service areas compared to the other contractor sizes. (This is in stark contrast to obligations for products, where the Big 6 accounted for over one-third of obligations in every year between 2000 and 2011.)[3] The market share held by medium-sized contractors decreased from 36 percent in 2000 to 30 percent in 2011. These firms held the biggest shares in the FRS&C and MED service areas. Small contractors maintained a relatively constant market share of some 19–20 percent. Companies in this size category held between 10 to 20 percent of each defense services area, with the smallest market shares in ERS, MED, and R&D services.

It appears that the defense drawdown and reductions in spending on service contracts have affected medium-sized firms and the Big 6 the most. Small companies, whose market share is protected by government set-asides, saw their market share reduced by almost 5 percent ($2 billion), while large companies returned to 2009 levels ($60 billion) after a slight decrease in 2010. The Big 6, however, decreased by some 18 percent ($9 billion) from 2009–2011, while medium-sized firms lost 7.5 percent ($5 billion).

In the coming years, the defense services industrial base will likely remain one that is dominated by large (non-Big 6) companies, as it was in the second half of the last decade. However, trends in some service areas indicate an increase of obligations to medium-sized firms that could come at the expense of large firms. Over the last three years observed (2009–2011), the CAGRs of medium-sized firms outpaced those of large companies in nearly every individual service area, most notably in MED, ERS, and ICT. While total dollars obligated to medium-sized firms remain lower than those obligated to large firms, if the growth of medium-sized contractors continues at the pace it did in the last three years, they will soon attain similar market share to their large peers. In PAMS, however, large contractors are likely to remain the most important size category, as they have recently been gaining market share at the expense of both the Big 6 and medium-sized contractors. This reflects the effects of two strategies recently being pursued by large contractors. The first strategy involves divesting themselves of their government services divisions, and the second strategy involves the acquisition of small- and medium-sized companies specializing in service areas where there is high or growing demand, such as ICT and PAMS.[4] As large companies such as L3 and SAIC spin off their services divisions, these new companies will likely become medium-sized contractors that will raise the share of the market for that size category. In parallel, as large companies acquire small ones, they will grow their market share.

Overall, the data in this report indicate good compliance with recent executive guidance to the defense services acquisition community. However, there remain some disconnects between recent contracting trends and acquisition policies, particularly with regard to competition and contract funding mechanisms. President Obama, in his March 2009 memo on government contracting, directed that preference be given to fixed-price contracts and that more

[3] Berteau et. al (2012) U.S. Department of Defense Contract Spending and the Supporting Industrial Base, Center for Strategic and International Studies, Washington, DC, p. 41.

[4] Censer, Marjorie. Washington Post. "Defense Industry is Reshaping Itself in a Multitude of Ways," September 16, 2012; Fryer-Riggs, Zachary. "Price Wars Prompt Firms to Abandon Service Sector." DefenseNews, September 9, 2012.

contracts be awarded using full and open competition. The September 2010 and November 2012 "Better Buying Power" initiatives issued by the DoD reiterated the President's guidance by instructing the defense acquisition community to employ appropriate contract types, compete more contracts, and increase participation by small businesses. The number of contract dollars funded through fixed-price mechanisms for defense services did increase faster than cost-reimbursement contracts (7 percent for fixed price, 5.5 percent for cost reimbursement), and the increase in share of total dollars obligated was similar (7.5 percent) for both of these funding mechanism categories. Regarding competition, contract dollars obligated in the "full and open competition" category actually decreased between 2010 and 2011, while dollars obligated under "no competition" increased. In addition, the share of dollars obligated after some form of competition decreased from 78 percent to 76 percent, while that of contract dollars obligated without competition increased from 22 percent to 24 percent. Regarding the greater involvement of small businesses, though the overall government goal is for 23 percent of prime contracts to be awarded to small businesses, the contract dollars obligated to small business for defense services decreased between 2010 and 2011 (from $41 billion to $39 billion).

# Appendix 1: Crosswalk Between DoD Service Portfolios & CSIS Service Areas

Appendix 1 details the differences between CSIS' categorization of service areas (based on FPDS service codes) and the way the DoD classifies these services. Note that there are two DoD Portfolios that do not have direct CSIS service area equivalents because they are included in other categories: Transportation Services (split between ERS and PAMS) and Construction Services (included in FRS&C). Service codes highlighted in red indicate those that are not in the complimentary category of the other categorization schema.

| CSIS Service Area | DoD Portfolio |
|---|---|
| **Equipment-related Services** *[Elements of PSC Codes **J** (All except what falls under ICT), **K** (All except what falls under ICT), **N** (All except what falls under ICT), **P** (P100, P200, P300, & P999), **V** (V001-V003, V111-V115, V119, V121-V127, V129), **W** (All except what falls under ICT)]* | **Equipment-related Services** *[Elements of PSC Codes **H** (H*10-H*20, H*23-H*26, H*28-H*31, H*43, H*44, H*47, H*48, H*53, H*68, H*69, H*80, H*81, H*91, H*93, H*96, H*95, & H*99), **J** (J010-J020, J023-J026, J028-J031, J043, J044, J047, J048, J053, J068, J069, J080, J081, J091, J093-J096, J099, & J999), **K** (K010, K012-K020, K023-K026, K028-K031, K043, K044, K047, K048, K053, K068, K069, K080, K081, K091, K093, K095, & K099), **L** (L010, L012-L020, L023-L026, L028-L031, L043, L044, L053, L068, L069, L080, L081, L091, L093, L096, & L099), **N** (N010, N012, N015-N017, N019, N020, N023-N026, N028-N031, N043, N044, N047, N048, N053, N068, N069, N080, N081, N091, N093, N095, & N099), **P** (P100, P200, P300,& P999), **W** (W010, W012, W013, W015-W020, W023-W026, W028, W030, W031, W043, W044, W047, W048, W053, W068, W069, W080, W081, W091, W093, W094, W096, & W099) ]* |
| **Facility-related Services & Construction** *[All of PSC Codes **E,F,M,X, Y,Z**; Elements of PSC Codes **P** (P400 & P500), **S** (All except what falls under ICT)]* | **Facility-related Services** *[All of PSC Codes **C, E, F, M, X, Z**; Elements of PSC Codes **H** (H*22, H*32, H*34-H*41, H*49, H*51, H*52, H*54-H*56, H*66, H*67, H*71-H*75, H*77-H*79, H*83-H*85, & H*87-H*89), **J** (J022, J032, J034-J041, J049, J051, J052, J054-J056, J066, J067, J071-J075, J077-J079, J083-J085, & J087-J089), **K** (K032, K034-K041, K049, K052, K054, K056, K066, K067, K071, K072, K074, K075, K077-K079, K083-K085, & K088), **L** (L034-L036, L038-L041, L049, L051, L052, L054-l056, L066, L067, L071-L075, L077-L079, L083-L085, L087-L089), **N** (N022, N032, N034-N041, N049, N051, N052,N054-N056, N066, N067, N071-N075, N077-N079, N083-N085, N087, & N088), **P** (P400 & P500), **S** (All except what falls under E&CS), **W** (W022, W032, W034-W041, W049, W052, W054, W056, W066, W067, W071-W075, W077-W079, W083-W085, & W087-W089) ]* |
| **Information & Communication Technology Services** *[All of PSC Code **D**; Elements of PSC Codes **H** (H158, H170, H258, H270, H358, H360, H370, H958, H960, & H970), **J** (J058, J060, & J070), **K** (K058,K060, & K070), **L** (L058, L060, & L070) **N** (N058,N060, & N070), **S** (S113), **W** (W058, W060, & W070)]* | **Electronics & Communications Services** *[All of PSC Code **D**; Elements of PSC Codes **H** (H*58-H*63, H*70), **J** (J058-J063, J070), **K** (K058-K063, K070), **L** (L058-L063, L070), **N** (N058-N063, N070), **R** (R426), **S** (S113), **W** (W058-W063, W070)]* |
| **Medical Services** *[All of PSC Codes **G** & **Q**]* | **Medical Services** *[All of PSC Code **Q**]* |
| **R&D** *[Elements of PSC PSC Code **A** (All except what falls under PAMS)]* | **R&D** *[All of PSC Code **A**]* |
| **Professional, Administrative, and Managerial Support** *[All of PSC Codes **B,C,R,T, and U**; Elements of PSC Codes **A** (A**6), **H** (All except what falls under ICT), **L** (All except what falls under ICT), **V** (V211-214, V221-227, V231, V241, V251, V301, V302, & V999) ]* | **Knowledge-based Services** *[All of PSC Codes **B, T, U**; Elements of PSC Code **R** (All except what falls under E&CS)]* |

Three of the CSIS service areas capture more contract obligations than do their DoD portfolio counterpart for 2011 (in constant 2011 dollars): ERS - $8.7 billion; FRS&C - $14.9 billion; and PAMS - $10.1 billion.

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